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Research Paper

Informal sector and Migrant Labour: An Empirical Analysis of Lewis Model in Gujarat

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Abstract
This study attempts to estimate first, total labour in rural India to get an idea of how far rural sector provides employment to those who are fully engaged in it. The study also estimates separately the surplus labour in agriculture sector in rural India. In this context, this study would attempt to explore the trends and patterns of employment in Indian labour market, particularly workers from agricultural to construction sector. Agriculture sector made a negative contribution to increase in jobs, whereas construction sector is playing a significant role in creation of employment. Majority of rural workers are moving towards urban sector. Continuously rising migration from rural to urban sector and labour shortages in some rural areas have raised some substantial questions, like:
What are the current employment trends and patterns in India and Gujarat?
Is growth rate of employment in construction sector distress driven from agriculture sector?
Is wage rate rise in agriculture sector due to migration in construction sector?
For this purpose, NSSO quinquennial rounds 61st round (2004–05) and 68th round (2011–12) would be used. This data would be analysis for finding out surplus labour in rural and agricultural sector. The findings of the study suggest that since beginning of 21st century, India has faced at least labour shortage in rural sector, particularly in plantation, harvest and peak period of agriculture. As a result, the scarcity of labour compels rural sector to compete for workers and wage rate of workers commencing to rise in both rural and sector. However, process of wage increases and labour absorption in both rural and urban sectors are very slow and surplus labour is still available in rural landscape. It is old workers who have stayed in rural areas that are in surplus labour. In the near future India could face labour shortage in rural area with the current trend of migration and expansion of both rural and urban sectors. The paper concludes that sustainability of economic growth in India requires an upgrading of labour market to accommodate the merging of the agriculture and construction sector.

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I. Introduction

Informal sector has a remarkable capacity to provide jobs and supply jobs, primarily to the poorest part of the population with basic goods and services. Informal sector has outstripped the formal sector, in terms of numbers employed and shows a good prospect for further growth. Unorganised/Informal sector comprises 92 per cent of total workforce wherein about 50 per cent of them are construction workers **(**Neff et al. 2012**).**In terms of employment, construction sector is the second largest, next only to agriculture, employer in the country (Soundararajan 2013). According to Planning Commission, the numbers of construction workers was 17.54 million in 1999–00 and 26.02 million in 2004–05. It went up to 44.04 million in 2009–10 and it is projected to be 92 million people till 2022. Thus almost 50 million jobs would be created by this industry, in next the 10–12 years.

The slow growth rate of employment was due to agriculture and manufacturing sectors making negative contributions to the increase in employment, whereas among the sub-sectors of the industrial sector, only construction plays a vital role in Indian labour market during this period (Papola 2012; Behera 2012; Himanshu 2011; Jatav et al. 2012). It is also noted that workers who live in rural area find the agricultural sector with surplus of labour and low wages, further seasonal demand for labour deprives them of regular earnings. As a result, they are forced to move temporarily to work in construction sector to meet the dire needs of the family

(Madhok 2005). This study attempts to estimate first, total labour in rural India to get an idea of how far rural sector provides employment to those who are fully engaged in it. The study also estimates separately the surplus labour in agriculture sector in rural India. In this context, this study would attempt to explore the trends and patterns of employment in Indian labour market, particularly workers from agricultural to construction sector. Agricultural sector made a negative contribution to increase in the jobs whereas construction sector played a significant role in the creation of employment. Majority of rural workers are moving towards the urban sector.

II. Research Methodology

As for the empirical base of the study, the data from employment and unemployment survey in India (10^{th} Schedule) of National Sample Survey (NSS) 68^{th} round (2011–12) has been used. The cross sectional survey is roughly representative of the national, state and so-called "NSS region" level. The usual principal activity status and principal and subsidiary activity status is used to examine employment status of a person. The principal job activities are defined for all household members as self-employed, regular salaried worker, casual wage workers and so on. NSS used NIC (National Industrial Classification)-2008 at 2 digit level for collecting data on industrial engagement of people. The 2 digit classifications of industries include 24 manufacturing industries. We have checked the employment and wage structure of only construction sector. In this data set, the sample size covering only the individuals engaged in construction sector either as wage workers or non-wage workers within the age group of 15–59 years.

The study is based on the mixture of both primary and secondary data. The major sources of secondary data used would be NSSO, Employment and Unemployment Situation in India: NSS 61^{th} round (2004–05) and NSS 68^{th} round (2011–2012) on Employment and Unemployment in India; published and unpublished documents of Government of India and Government of Gujarat, published books, articles from scholarly journals, and online information etc. The main priority would be assigned to primary research materials. Some strategies would be adopted to collect quantitative and qualitative data. In this part, the following research methods have been discussed: research design, sample design, methods/tools/techniques of data collection and data analysis.

2.1: Research design

This is an empirical study which is mainly based on field survey. In order to collect primary micro level data, a survey was conducted in the four cities of Gujarat. The State is situated in the western coast of India region and which has received a huge amount of the migrant population in construction industry from the rest of the country during the first decade of 21^{st} century. To identify dynamics of employment between rural agricultural sector and urban construction areas and wage rates in labour markets, an empirical study was made in urban areas. Since, size of construction workers in informal urban sector is unknown; it is not possible to decide in the statistical sense how random our sampling was. However, our sampling was random in the sense that workers were selected randomly at their places of work, in the places they were living (besides construction site) and labour chowk where workers wait for contractors/employers. The selection of construction site was also random, because most of the workers refused to provide information at construction site.

2.2: Sample Design

This study has been selected with one city from each region/mandal of Gujarat on the basis of geographical location and construction growth and development, etc. Thus, four cities/talukas have been selected namely, Ahmadabad city/taluka from Central Gujarat, Mehsana city/taluka from North Gujarat, Surat city/taluka from South Gujarat and Rajkot city/taluka from Saurashtra and Kachchh mandal of the State. For conducting the survey, ten to twelve construction sites would be selected purposefully based on their construction work and progress from each city. Finally 134, 31, 74 and 109respondents from each of the four cities will be selected for making a total of 382 respondents, respectively. The duration of data collection was 20^{th} July, 2015 to 28^{th} January, 2016 and samples of workers were drawn from urban city centre and attempt was made to interview respondents who had come from agricultural background.

Table 1.1: Table 1: Sample Selection Criteria in Cities of Gujarat

Region/Mandal	Urban Agglomeration/ City	Main Workers	Weight	Necessary Sample Size	Primary Survey	Weight for Primary Survey
North Gujarat	Ahmedabad	1956236	0.46	162.54	134	0.39
Central Gujarat	Mehsana	52831	0.012	4.38	31	0.09
South Gujarat	Rajkot	441643	0.11	36.69	74	0.21
Saurashtra and Kachchh	Surat	1737481	0.42	144.36	109	0.31
Total		**4188191**	**1**	**348**	**348**	**1**

Source: Census of India, 2011

A perusal of the table 1.1 reveals that necessary sample size should be 162, 4, 36 and 144 samples from Ahmedabad, Mehsana, Rajkot and Surat, respectively. However, sample size in Mehsana is 4, which is very less or negligible. Therefore, the study has increased the sample size from 4 to 31 respondents in the Mehsana city. Again, sample size in Rajkot should be 36, which is also very less. As Rajkot belongs to Saurashtra and Kutch region and this region represents maximum number of cities included Jamnagar, Junagarh and Bhavnagar city, where construction work is going on rapidly and covers the highest land area in Gujarat. Therefore, this sample size could not represent entire Saurashtra and Kutch region. Hence, the study has increased sample size from 36 to 74 respondents in the Rajkot city. Further, the study has chosen 134 samples from Ahmedabad city and 109 samples from Surat City. The study has decreased sample size in these cities, because sample size in Rajkot and Mehsana has increased. Finally, on the basis of weight value, 134, 31, 74 and 109 samples has selected from Ahmedabad, Mehsana, Rajkot and Surat, respectively.

2.3: Methods/Tools/Strategies of Data Collection

Cross sectional analysis is being carried out in this study. The method of data collection would be chosen for the study is quantitative and qualitative data. Structured schedule would be prepared with open/ended questions. Stratified Random Sampling method would be used to choose the respondents in each construction site. Direct personal interview and focus group discussion (FGD) would be adopted to collect the data from respondents. Finally, the statistical tools employed would be mean, mode, standard deviation, etc.

2.4: Survey Modules

Survey questionnaire was designed on the basic of the framework of the pilot/M. Phil survey conducted by me in the year 2012 and was customised further to incorporate more variables so as to capture the characteristics of construction workers learned from the previous survey. The objective was to create a rich data set on the economic behavior of construction workers to establish its links to better policymaking. Therefore, the questionnaire was designed to capture information at the individual level. The questionnaire provided information on demographic-social profile (such as age, sex, social group, educational attainment, etc.) as also took migration and employment details (nature and description of employment, supply for and demand of labour in construction, etc.), land holdings of respondent and daily wage rate in the agricultural position and daily as well as monthly and yearly income in the construction sector, role of informal and formal networks and contract system in construction.

2.5: Area of the Study

Four districts were selected for the purpose of the study. The districts selected were Ahmedabad as the industrial capital of the State, Surat as the district in which construction activities take place on a mass scale, Rajkot as the district where the people spent a major portion of their earnings from Europe countries on construction activities and Mehsana as the district having the least construction activities and the lowest number of construction workers. Purposeful sampling technique was used and sample size was decided under proportional allocation method. Even though the Board classified the workers under 26 categories, for the purpose of this study, the sample have been classified into 7 categories like Masons, Carpenters, R.C.C. workers, Wiremen, Painters, Helpers and others. The criteria adopted for a construction worker to be included in the sample selection were the following: he/she should be employed for doing any work in connection with building construction, including residential, industrial, and commercial projects and any work relating to the supply of building materials, and who gets his/her wages directly or indirectly from an employer or contractor/sub-contractor.

2.6: Ordinary Least Squares and Two Stage Least Square Methods

The ordinary least squares method was used to compute the estimation of parameters. It is one of the oldest techniques of modern statistics, it was first published in 1805 by the French mathematician Legendre but the famous German mathematician Gauss, claimed to have used it as early as 1795. Galton used the technique in 1886 in his work on the heritability of size which laid the foundations for correlation and regression analysis. Both Pearson and Fisher used and developed it in different contexts (factor analysis for Pearson and experimental design for fisher). Today, the least squares method is widely used to find or estimate the numerical values of parameters to fit a function to a set of data and to characterise the statistical properties of estimates. It exists with several variations; and its simpler version is the called Ordinary Least Squares (OLS).

Socio-Economic Profile of Construction Workers in Gujarat

The economic development and prosperity of any region largely depends on the socio-economic composition and quality of its people. If they are hardworking, ambitious and willing to bear the risk, the region will develop. As it is well known, India is a country with many castes, creeds, religions, languages etc. and from time immemorial; that multiplicity has been the backbone of Indian society. Most of the workers were brought up in rural natural surroundings, where contact remained with the village and there is usually some kind of home to fall back upon in case of need and emergency. The Royal Commission on Labour has in this connection rightly observed "In sickness and in maternity, in strikes and lockouts, in unemployment and old age, the village home is a refuge for many and the fact that it exists, affords, a sense of security, even when it is required". Thus the village homes provide a shelter, for workers, who get into difficulties owing to illness, epidemics, strikes, disability, old age or unemployment. The results of study on an empirical analysis of changing dynamics of employment in Gujarat are discussed and presented under the following heads.

Gender Profile

The purpose of gender-wise information is to demonstrate the discrimination in the construction industry. Out of the total, the proportion of males and females was nearly 80 per cent (280 respondents) and 20 per cent (68 respondents), respectively. This implies that one-fifth (1/5) of workers were female migrants (i.e., every fifth person was a female worker) and the remaining fourth-fifth (4/5) of workers were male migrants in construction sector. Vankar and John (2004) also reported that the sex ratio of male and female was nearly one-fourth (1/4) and three-fourth (¾) respectively.The profile of the present study which was carried out on these workers are given in Table 6.3.

Table 6.3: Gender Profile of Construction Workers

Sr. No.	Social Category	Ahmedabad		Mehsana		Rajkot		Surat		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
1	Male	96	27.59	27	7.76	61	17.53	96	27.59	280	80.46
2	Female	38	10.92	4	1.15	13	3.74	13	3.74	68	19.54
Total		**134**	**38.51**	**31**	**8.91**	**74**	**21.26**	**109**	**31.32**	**348**	**100.00**

Source: Based on Primary Survey, 2015-16

The table 6.3 reveals very high majority of male workers as compared to female workers. 80.46 per cent (280 respondents) of workers were belonged to the male category, wherein nearly 27.59 per cent (96 respondents) were from Ahmedabad, 7.76 per cent (27 respondents) from Mehsana, 17.53 per cent (61 respondents) from Rajkot and 27.59 per cent (96 respondents) from Surat. The remaining nearly 19.48 per cent (68 respondents) belonged to the female category, wherein nearly 10.92 per cent (38 respondents) were from Ahmedabad, nearly 1.15 per cent (4 respondents) from Mehsana, 3.74 per cent (13 respondents) from Rajkot and same per cent from Surat City of Gujarat.

Family Types and Family's Size

Family size is an important factor, which influences one's standard of living. The size of the household plays an important role in determining the employment because depending on the size in which people try to find employment somewhere even for lower wages (John 2002). It is therefore essential to understand the family size of the workers. In the current study, nearly 45 per cent (157 respondents) of workers came from medium size family (i.e. two to four members), and remaining nearly 55 per cent (191 respondents) of workers came from big size family. Thus it can be said that when the size of family was big, income of the male members was not found to be sufficient and women were forced to work in the labour market (John 2002). The size of the family of the respondents covered in the study is given in Table 6.4.

Table 6.4: Family Size of Construction Workers

Family Size	Ahmedabad		Mehsana		Rajkot		Surat		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
<=2	55	41.04	2	6.45	3	4.05	4	3.67	64	18.39
03–04	19	14.18	8	25.81	20	27.03	46	42.20	93	26.72
05–06	38	28.36	17	54.84	35	4.05	41	37.61	131	37.64

07–08	16	11.94	3	9.68	14	18.92	16	14.68	49	14.08
09=<	6	4.48	1	3.23	2	4.05	2	1.83	11	3.16
Total	134	100.00	31	100.00	74	100.00	109	100.00	348	100.00

Source: Based on Primary Survey, 2015–16

It is evident from the Table 6.4 that 45.11 per cent (157 respondents) of workers hailed from a family size of 1–4 members and remaining the family size of 54.89 per cent (180 respondents) of workers was 5–8. Only nearly 3 per cent (11 respondents) lived with family members more than 8. Majority of family size consisted of three to six persons. 37.61 per cent (131 respondents) workers mentioned that they had five to six members in his family under this category. nearly 28 per cent (38 respondents) were from Ahmedabad, 55 per cent (17 respondents) from Mehsana, 4 per cent (35 respondents) from Rajkot and 38 per cent (41 respondents) from Surat, three to forth family size accounted nearly 27 per cent, wherein nearly 14 per cent (19 respondents)were from Ahmedabad, 26 per cent (8 respondents) from Mehsana, 27 per cent (20 respondents) from Rajkot and 42 per cent (46 respondents) from Surat City of Gujarat.

Joint family

Workers from joint family workers were more likely to migrate than workers from nuclear family. This is one of the push factors for migration. The size of the family of the respondents covered in the study area is given in Table.

Table 6.5: Type of Family of Construction Workers

Sr. No	Type of Family	Ahmedabad		Mehsana		Rajkot		Surat		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
1	Nuclear	33	9.48	6	1.72	15	4.31	51	14.66	105	30.17
2	Joint	101	29.02	25	7.18	59	16.95	58	16.67	243	69.83
	Total	134	38.51	31	8.91	74	21.26	109	31.32	348	100.00

Source: Based on Primary Survey, 2015–16

Table 6.5 reveals that majority of the workers belonged to the joint family. This is because workers from joint family are more willing to migrate. This is one of the push factors for migration. 70 per cent (243 respondents) of workers were belonged to joint family, wherein nearly 29 per cent (101 respondents) from Ahmedabad, 7.18 per cent (25 respondents) from Mehsana, 17 per cent (59 respondents) from Rajkot and 17 per cent (58 respondents) from Surat, while remaining nearly 30 per cent (105 respondents) were belonged to nuclear family, wherein nearly 9 per cent (33 respondents) from Ahmedabad, 2 per cent (6 respondents) from Mehsana, 4 per cent (61 respondents) from Rajkot and Surat city of Gujarat.

Marital Status

Marital Profile is a significant component of social condition in India. Majority of the construction workers were married before the legal age of marriage of 18 years for females and 21 years for males. The marital status of the respondents covered in the study area is given in Table.

Table 6.6: Marital Status of Construction Workers

Sr. No.	Marital Status	Ahmedabad		Mehsana		Rajkot		Surat		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
1	Married	104	29.89	20	5.75	54	15.52	94	27.01	272	78.16
2	Unmarried	29	8.33	11	3.16	19	5.46	11	3.16	70	20.11
3	Single, Never Married	0	0.00	0	0.00	0	0.00	1	0.29	1	0.29
4	Windowed/Divorced/Sep	1	0.29	0	0.00	1	0.29	3	0.86	5	1.44
	Total	134	38.51	31	8.91	74	21.26	74	21.26	348	100.00

Source: Based on Primary Survey, 2015–16

The table 6.6 shows that 78.16 per cent (272 respondents) were married, while 20.11 per cent (70 respondents) unmarried and 0.29 per cent (1 respondent) single or bachelor or never married and 1.44 per cent (5 respondents) windowed/divorced/separate from their partners.

Religious Profile

Religious profile of the respondents is an important component of the socio–economic condition of construction workers. Only four major religious groups (Hindus, Muslims, Buddhist and Christian) were represented. The religion of the respondents covered in the study area is given in Table.

Table No. 6.7: Religious Profile of Construction Workers

Sr. No	Religion Profile	Ahmedabad		Mehsana		Rajkot		Surat		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
1	Hindu	96.27	129	80.65	25	90.79	67	81.31	89	89.08	310
2	Muslim	2.99	4	16.13	5	9.21	7	15.89	17	9.48	33
3	Buddhist	2.99	1	0	0	0	0	1.87	2	0.86	3
4	Christian	0	0	3.23	1	0	0	0.93	1	0.57	2
Total		100	134	100	31	100	74	100	109	348	348

Source: Based on Primary Survey, 2015–16

The table 6.7 shows that Out of the total, a huge majority of construction workers, that is, 89.08 per cent (310 respondents) were Hindus and the remaining 10.92 per cent (38 respondents) were Muslims including Buddhist and Christian, which included only 0.86 per cent (3 respondents) and 0.57 per cent (2 respondents, respectively.

Category Profile

Workers in the construction work are drawn mostly from weaker sections of the society. A major change seems to have occurred in the caste composition – a vast majority of workers are from depressed or disadvantaged groups, i.e. SCs and STs. This is because the ST population in Gujarat is more than the SC population. The Dahod district has a very high concentration of STs. They work in the agricultural and allied sectors as full–time employees, and during the lean period, they join the construction sector as part–time workers like those from the general category. Another reason seems to be that SC and OBC workers can access job market information through close relatives and other informal networks along the lines of caste and kinship bonds.

Table 6.8: Category of Construction Workers

Category	Ahmedabad		Mehsana		Rajkot		Surat		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Scheduled Caste	44	46.81	10	10.64	15	15.96	25	26.6	94	27.01
Scheduled Tribe	36	43.9	8	9.76	14	17.07	24	29.27	82	23.56
Other Backward Caste	47	31.54	10	6.71	42	28.19	50	33.56	149	42.82
None of the Above	7	30.43	3	13.04	3	13.04	10	43.48	23	6.61
Total	134	38.51	31	8.91	74	21.26	109	31.32	348	100.00

Source: Based on Primary Survey, 2015–16

The table 6.8 reveals that a major change seems to have occurred in the caste composition of workers in the last 15 years. A vast majority of workers were from depressed or disadvantaged groups, that is, STs. The ST population is predominant in Dahod District of the State. Out of the total, approximately 23.56 per cent (82 respondents) of workers were STs, while they were nine per cent in 2003 and nil/negligible in 1998. Again, 42.82 per cent (149 respondents)of workers were from Other Backward Classes (OBCs), while they were 23 per cent in 2003. Similarly, 27.01 per cent (94 respondents) workers belonged to SCs, while they were 61 per cent in 2003 and 100 per cent in 1998. Out of the total, only 6.61 per cent (23 respondents) were in the general category, while they were 4 per cent in 2003. These data reveal that deprived classes of workers were engaged in the development process of the City.

Educational Attainment

Education empowers labourers with higher bargaining power and competitive skills. It helps workers to be free from exploitation. Literacy is one among several indicators of educational development.It provides not only knowledge but also a good job in any sectors including the construction sector.

The main effect of literacy is to provide people with an additional means of communication. Literacy may contribute to economic development by a) raising productivity of the new literates, b) raising the productivity of individual workers, in association with literate the so called "first–round" spill overs of literacy, c) reducing the cost of transmitting useful information of individuals (health and nutrition) by creating a new channel for disseminating knowledge, d) stimulating the demand for vocational training and technical education, and e) strengthening economic incentives meaning the tendency for people to respond positively to arise in the rate to reward for their efforts. Literacy has a pervasive value in reducing costs and in improving the productivity of the economy (Schultz; 1967). An attempt has been made in the current study to assess the literacy level among the migrant construction workers.

Table 6.9: Educational Attainment of Construction Workers

Sr. No.	Educational Attainment	Ahmedabad		Mehsana		Rajkot		Surat		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
1	Illiterate	41	11.78	12	3.45	31	8.91	26	7.47	110	31.61
	Madrasa	0	0.00	3	0.86	0	0.00	2	0.57	5	1.44
2	Up To Primary	42	12.07	6	1.72	23	6.61	25	7.18	96	27.59
3	Intermediate	31	8.91	4	1.15	13	3.74	19	5.46	67	19.25
4	S.S.C.	11	3.16	5	1.44	4	1.15	23	6.61	43	12.36
5	H.S.C.	9	2.59	1	0.29	2	0.57	11	3.16	23	6.61
6	Graduate	0	0.00	0	0.00	0	0.00	3	0.86	3	0.86
7	Polytechnics/ITI	0	0.00	0	0.00	1	0.29	0	0.00	2	0.57
8											
Total		134	38.51	31	8.91	74	21.26	109	31.32	348	100

Source: Based on Primary Survey, 2015–16

The table 6.9 reveals that majority of workers were illiterate, which accounted 31.61 per cent (110 respondents), wherein 11.78 per cent (41 respondents) were from Ahmedabad, 3.45 per cent (12 respondents from Mehsana, 8.91 per cent (31 respondents) from Rajkot and 7.47 per cent (26 respondents) from Surat. Out of the literate, 27.59 per cent (96 respondents) educated up to primary and 1.44 per cent (5 respondents) were educated from Madrasa, 19.25 per cent (67 respondents) educated intermediate, 12.36 per cent (43 respondents) were educated senior secondary class, 6.61 per cent (23 respondents) were educated higher secondary class, 0.86 per cent (3 respondents) was graduated and remaining 0.57 per cent (2 respondents) were trained from ITI/polytechnics. According to the table, out of the total, nearly 68.39 per cent (238 respondents) were educated, whereas the remaining 31.61 per cent (110 respondents) of construction workers were illiterates, whereinWherein 11.78 per cent (41 respondents) from Ahmedabad, 3.45 per cent (12 respondents) from Mehsana, 8.91 per cent (31 respondents) from Rajkot and remaining 7.47 per cent (26 respondents) from Surat, respectively.

Age Composition

Age profile plays a prominent role in undertaking any economic activity. Age groups between15–59 is considered economically active population because, they have high physical stamina and they are hard-working, ambitious and willing to bear the risk (John, 2002). Table 6.10 shows the observed distribution of workers in construction sector by different age groups.

Table 6.10: Age Profile of Construction Workers

Age Group	Ahmedabad		Mehsana		Rajkot		Surat		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
15–29 Years	89	25.57	15	4.31	47	13.51	49	14.08	200	57.47
30–45 Years	42	12.07	14	4.02	16	4.60	54	15.52	126	36.21
46–59 Years	3	0.86	2	0.57	11	3.16	5	1.44	21	6.03

Above to 59 Years	0	0.00	0	0.00	0	0.00	0	0.00	1	0.29
	134	38.51	31	8.91	74	21.26	109	31.32	348	100.00

Source: Based on Primary Survey, 2015–16

The table 6.10 reveals that majority of the workers were in the age group of 21–29 years which was nearly 57.47 per cent (200 respondents) of the total, followed by the age group 30–45 years which constituted nearly 36.21 per cent (126 respondents) of the total. Thus, more than ninthly per cent of workers were in the age group 21–45 years. A minimum proportion of workers were in the age group of 45–60 years, which was 6.03 per cent (21 respondents). The proportion of child labour and age group of 60 and over was nearly nil/negligible.

There was no migrant found aged above 50 years in the study area. They migrated in the most productive age in order to take advantage of employment opportunities and also make to good earnings. The table revealed that the percentage of people, who migrated to work was high in the age group of 20–50 years at a because in the later age, they would not fit for heavy jobs due to health conditions and hazardous nature of work. The study conducted by Nair (2005) on "Migrant labourers from Gujarat and the impact on household economy" pointed out that the gulf emigration from Gujarat was predominantly at their prime age of work. Majority of migrants were relatively young and they belonged to the age group of less than 30–44 years. The migrants from rural areas were younger than those from urban areas.

Migration Profile

Migration profile is characterised by large out–migration of unorganised workers such as agricultural workers, construction workers and domestic workers. Remittances from out migration have a favourable impact on the living status of the respondents. However, while remittances provide a significant source of income for the migrant households, the impact of migration depends on the size and use of remittances. Migrants in general sent their remittances through banks, trusted friends or by other family members according to the need of the household. Some of the migrants saved some part of their income at their working or native places. Despite the earnings from remittances, less than 50 per cent were sent to their families as they had to spend for their accommodation, food and other personal expenses in the work place.

There are obvious wage disparities between intra-state migrants and inter-state migrants. To some extent, workers from outside the state are better off than their counterparts from within the state. Local construction workers suffer from chronic unemployment due to the availability of migrant workers who are willing to work for lower wages (SEWA Academy, 2000)**.** Because migrants from other states work on big projects, they work for at least three to six months continuously on a regular basis. On the other hand, local workers and migrants within the state are deprived from regular employment and tend to work only on small homes or projects (Singh, 2016). A large number of construction workers offered valuable input, during the study and the details are presented in Table.

Table 6.14: Rural Urban Migration in Gujarat (in per cent)

AHMEDABAD							**MEHSANA**					
State	**Rural**		**Urban**		**Total**		**Rural**		**Urban**		**Total**	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**		**No.**	**%**
Destination	0	0	25	7.18	25	7.18	0	0	5	1.44	5	1.44
Gujarat	20	5.75	0	0	20	5.75	8	2.3	0	0	8	2.3
Bihar	6	1.72	0	0	6	1.72	0	0	4	1.15	4	1.15
Chhattisgarh	3	0.86	0	0	3	0.86	0	0	0	0	0	0
Jharkhand	1	0.29	0	0	1	0.29	3	0.86	0	0	3	0.86
Madhya Pradesh	15	4.31	3	0.86	18	5.17	1	0.29	0	0	1	0.29
Maharashtra	2	0.57	1	0.29	3	0.86	0	0	0	0	0	0
Orissa	10	2.87	0	0	10	2.87	2	0.57	0	0	2	0.57
Rajasthan	40	11.49	0	0	40	11.49	6	1.72	0	0	6	1.72
Uttar Pradesh	8	2.3	0	0	8	2.3	0	0	2	0.57	2	0.57
West Bengal	0	0	0	0	0	0	0	0	0	0	0	0
Total	**105**	**30.17**	**29**	**8.33**	**134**	**38.51**	**20**	**5.75**	**11**	**3.16**	**31**	**8.91**
RAJKOT							**SURAT**					
State	**Rural**		**Urban**		**Total**		**Rural**		**Urban**		**Total**	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	0.57	**No.**	**%**
Destination	0	0	11	3.16	11	3.16	0	0	2	0	2	0.57
Gujarat	23	6.61	0	0	23	6.61	9	2.59	0	0	9	2.59
Bihar	6	1.72	0	0	6	1.72	16	4.6	0	0	16	4.6
Chhattisgarh	1	0.29	0	0	1	0.29	4	1.15	0	0	4	1.15
Jharkhand	0	0	0	0	0	0	2	0.57	0	0	2	0.57

Madhya Pradesh	13	3.74	0	0	13	3.74	8	2.3	0	0	8	2.3
Maharashtra	0	0	0	0	0	0	7	2.01	0	0	7	2.01
Orissa	3	0.86	0	0	3	0.86	2	0.57	0	0	2	0.57
Rajasthan	13	3.74	0	0	13	3.74	32	9.2	0	0.57	32	9.2
Uttar Pradesh	4	1.15	0	0	4	1.15	22	6.32	2	0	24	6.9
West Bengal	0	0	0	0	0	0	3	0.86	0	1.15	3	0.86
Total	**63**	**18.1**	**11**	**3.16**	**74**	**21.26**	**105**	**30.17**	**4**	**0.57**	**109**	**31.32**

Source: Based on Primary Survey, 2015–16

The table 6.14 revealed that the largest number of migrant labour, to Gujarat was from Rajasthan, followed by Madhya Pradesh and Uttar Pradesh. Therefore, 52.5 per cent of the number surveyed was Bengalis, 35 per cent were Bihar. It was found that most of the workers who came to Gujarat were contract labourers and more than 75 per cent was unskilled workers. 56 per cent workers reported that they have visited their family at least once in a year.37 per cent and 5.5 per cent had visited their native place twice in a year and more than thrice a year respectively. The researcher found that all the migrants did visit their native place at least once during their stay.

Duration of Migration

It was found that in the initial years of struggle in the city, a migrant did casual work and thus going home meant the loss of daily wage. Only when they obtained regular work that the migrants started visiting the family, at least once in a year. Those whose employment is not secure come more frequently but stayed for shorter periods. To attend funeral of close relatives, litigation with a neighbour, attending the social ceremony necessitate an emergency visit. Similar situation was found in the current study also.

Table 6.15: Duration of Migration

Site	**Ahmedabad**		**Mehsana**		**Rajkot**		**Surat**		**Total**	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Below To 3 Months	59	44.03	21	67.74	64	86.49	45	41.28	189	54.31
4–6 Months	16	11.94	7	22.58	6	8.11	28	25.69	57	16.38
7–9 Months	27	20.15	1	3.23	0	0	19	17.43	47	13.51
10–12 Months	4	2.99	0	0	3	4.05	11	10.09	18	5.17
13–15 Months	27	20.15	0	0	1	1.35	1	0.92	29	8.33
16–18 Months	0	0	2	6.45	0	0	0	0	2	0.57
Above 2 Months	1	0.75	0	0	0	0	5	4.59	6	1.72
Total	134	100	31	100	74	100	109	100	348	100

Source: Based on Primary Survey, 2015–16

Reason for Migration

Factors which forced the migrant workers to leave their native places for destination state and the factor which attracts the migrant workers to the migrant states are closely correlative with motivational aspect. The factors which have forced the migrant workers to leave the native place for the migrant place could be easily identifiable as per the responses of the workers. However, since the construction workers in the cities are often migrants it would be pertinent to inquire into to the factors that motivate them to migrate. Enquiries at various sites revealed that people had left their native village for working in this sectors mainly owing to lack of income, job opportunities and indebtedness prevalent in those areas. The chief factors which were instrumental to attracting the migrant workers to the destination state have been identified by the workers as follows.

a) Comparatively higher wages in Gujarat (31per cent)
b) Get rid of debt (6 per cent)
c) Poor economic condition of family forced to migrate (30 per cent)
d) Lack of job opportunities compelled to migrate (28 per cent)
e) Invited by friends/relatives/Goanwalle (5per cent)

Daily Wages Rate, Monthly Expenditure and Monthly Income

Earning is an important factor for the analysis of economic background of an individual. From the field survey, it was found that the average daily wage was not sufficient for unskilled workers family to lead a decent life in the cities. Majority of workers worked around 8–10 hours per day, which indicated that they were paid

even less the minimum wages. Further, female workers, who were treated at the marginal end of the skilling pyramid usually faced more discrimination in wages. The earnings of the respondents from their employment are given in Table**.**

Table 6: Daily Wage Rate in Agricultural and Construction Sectors of Gujarat (City-wise)

Sr. No.	Daily Wage Rate (Rs.)	Ahmedabad	Mehsana	Rajkot	Surat	Total	Daily Wage Rate (Rs.)	Ahmedabad	Mehsana	Rajkot	Surat	Total
1	60	0	0	0	1.83 (2)	0.57 (2)	150	3.73 (5)	0	2.7 (2)	3.67 (4)	3.16 (11)
2	70	3.73 (5)	0	1.35 (1)	12.84 (14)	5.75 (20)	180	2.24 (3)	0	0	1.83 (2)	1.44 (5)
3	80	2.99 (4)	0	2.7 (2)	15.6 (17)	6.61 (23)	200	4.48 (6)	6.45 (2)	4.05 (3)	19.27 (21)	9.2 (32)
4	100	29.85 (40)	35.48 (11)	56.76 (42)	39.45 (43)	39.08 (136)	215	0.75 (1)	0	0	0	0.29 (1)
5	120	8.21 (11)	0	1.35 (1)	10.09 (11)	6.61 (23)	220	11.19 (15)	0	13.51 (10)	0.92 (1)	7.47 (26)
6	125	0	32.26 (10)	5.41 (4)	9.17 (10)	6.9 (24)	225	0.75 (1)	0	0	0.92 (1)	0.57 (2)
7	130	0.75 (1)	0	1.35 (1)	0	0.57 (2)	230	3.73 (5)	0	4.05 (3)	0	2.3 (8)
8	150	3.73 (5)	22.58 (7)	12.16 (9)	5.5 (6)	7.76 (27)	250	8.21 (11)	25.81 (8)	20.27 (15)	14.68 (16)	14.37 (50)
9	180	0	3.23 (1)	0	0	0.29 (1)	270	0	3.23 (1)	0	0	0.29 (1)
10	200	47.01 (63)	6.45 (2)	14.86 (11)	5.5 (6)	23.56 (82)	300	20.9 (28)	16.13 (5)	6.76 (5)	27.52 (30)	19.54 (68)
11	250	0	0	1.35 (1)	0	0.29 (1)	350	22.39 (30)	6.45 (2)	5.41 (4)	4.59 (5)	11.78 (41)
12	300	2.24 (3)	0	0	0	0.86 (3)	400	5.22 (7)	12.9 (4)	9.46 (7)	16.51 (4)	10.34 (36)
13	350	1.49 (2)	0	0	0	0.57 (2)	410	0.75 (1)	0	0	0	0.29 (1)
14	400	0	0	2.7 (2)	0	0.57 (2)	450	0	6.45 (2)	0	2.75 (3)	1.44 (5)
15	**Total**	100 (134)	100 (31)	100 (74)	100 (109)	100 (348)	500	2.24 (3)	16.13 (5)	16.22 (12)	2.75 (3)	6.61 (23)
16							550	0	0	1.35 (1)	0	0.29 (1)
17							600	13.43 (18)	3.23 (1)	2.7 (2)	4.59 (5)	7.47 (26)
18							650	0	3.23 (1)	0	0	0.29 (1)
19							700	0	0	13.51 (10)	0	2.87 (10)
Total								100 (134)	100 (31)	100 (74)	100 (109)	100 (348)

Source: Based on Primary Survey, 2015–16

The table 6.16 reveals that around 51 per cent (181 respondents) received Rs. 100 or less wages per day in agriculture, while very few workers around 2 per cent (8 respondents) received more than Rs. 200 per day and they belonged to Rajkot 1.35 per cent (1 respondent) and remaining 3.73 per cent(5 respondents) belongs to Ahmedabad city. Remaining around47 per cent (198 respondents) workers received wages between Rs. 100 to 200per day in agriculture sector. In other words, agricultural workers worked for meager wages. Many of them belonged to unskilled category they joined construction such as workers who loaded bricks, mixed cement, sand, lime, etc. In the construction sector, very few nearly 4.60 per cent (16 respondents) received less than Rs. 200per day, while majority of workers received more than Rs. 200 to 400 per day,whereinmost of them belonged to semi-skilled category, such as carpenters, painters, dumper drivers, electricians and others. Only around 10.5 per cent (37 respondents) received Rs. 600 and more per day, in which many belonged to highly skilled category such as tile-mosaic workers. They belonged to Ahmadabad, Surat, Rajkot, and Mehsana, which accounted 13.43 per cent (18 respondents), 4.59 per cent (5 respondents), 2.7 per cent (2 respondents) and 3.23 per cent (1 respondent), respectively. It would not be wrong to say that agriculture workers received one of the lowest wages, while construction workers were receiving one of the highest wages in the unorganised sector. The wage rates existing in the construction sector are one of the highest in the unorganised sector (John, 2002). The study suggests that agricultural workers should migrate to urban construction sector during the lean period. It can increase their income and decrease the surplus labour in India labour market.

The rate of wages paid to the different types of construction workers and consequently their earnings from this sector depended on a multitude of factors that included (i) the instability of demand and fluctuation in the market; (ii) segmented groups of different labour types, (iii) seasonal nature of employment; (iv) invisibility of principal employer-employee relations; (v) unregulated nature of the contractual relations; (vi) the control and dominance of labour contractors in the supply of labour; (vii) vulnerability of the workers by his economic conditions; and (viii) seasonal availability of employment and workers mobility between sectors or areas etc.

Table 7: Daily Wage Difference between Construction and Agricultural Sectors

Wage Difference	Ahmedabad		Mehsana		Rajkot		Surat		Total	
	No.	%	No.	%	No.	%	No.	%	No.	`%
-50	2	1.49	0	0	0	0	0	0	2	0.57
0	3	2.24	2	6.45	1	1.35	0	0	6	1.72
25	0	0.00	0	0	0	0	0.92	1	1	0.29
30	0	0.00	0	0	0	0	0.92	1	1	0.29
50	5	3.73	0	0	1	1.35	1.83	2	8	2.3
55	0	0.00	0	0	0	0	0.92	1	1	0.29
60	1	0.75	0	0	0	0	0	0	1	0.29
70	2	1.49	0	0	1	1.35	0.92	1	4	1.15
75	0	0.00	0	0	0	0	1.83	2	2	0.57
80	3	80	0	0	1	1.35	0.92	1	5	1.44
95	0	95	0	0	2	2.7	0	0	2	0.57
100	24	100	5	16.13	10	13.51	9.17	10	49	14.08
115	1	115	0	0	0	0	0	0	1	0.29
120	8	120	0	0	6	8.11	4.59	5	19	5.46
125	1	125	2	6.45	2	2.7	1.83	2	7	2.01
130	1	130	0	0	1	1.35	6.42	7	9	2.59
150	42	150	1	3.23	13	17.57	10.09	11	67	19.25
160	1	160	0	0	0	0	0	0	1	0.29
170	1	170	1	3.23	0	0	0.92	1	3	0.86
175	0	175	3	9.68	0	0	2.75	3	6	1.72
180	3	180	0	0	0	0	5.5	6	9	2.59
200	7	200	3	9.68	2	2.7	11.01	12	24	6.9
220	0	220	1	3.23	0	0	7.34	8	9	2.59
225	0	225	1	3.23	0	0	0	0	1	0.29
230	1	230	0	0	0	0	3.67	4	5	1.44
250	1	250	0	0	5	6.76	2.75	3	9	2.59
275	0	275	1	3.23	0	0	1.83	2	3	0.86
280	3	280	0	0	0	0	2.75	3	6	1.72
300	2	300	2	6.45	9	12.16	10.09	11	24	6.9
310	1	310	0	0	0	0	0	0	1	0.29
320	0	320	0	0	1	1.35	0	0	1	0.29
325	0	325	1	3.23	0	0	0	0	1	0.29
340	0	340	0	0	0	0	1.83	2	2	0.57
350	1	350	1	3.23	1	1.35	0	0	3	0.86
370	0	370	0	0	0	0	0.92	1	1	0.29
375	0	375	1	3.23	0	0	0	0	1	0.29
380	0	380	0	0	0	0	0.92	1	1	0.29
400	20	400	4	12.9	7	9.46	4.59	5	36	10.34
430	0	430	0	0	0	0	0.92	1	1	0.29
450	0	450	1	3.23	1	1.35	1.83	2	4	1.15
500	0	500	0	0	4	5.41	0	0	4	1.15

525	0	525	1	3.23	0	0	0	0	1	0.29
550	0	550	0	0	2	2.7	0	0	2	0.57
600	0	600	0	0	4	5.41	0	0	4	1.15
Total 134		Total 100.00	31	100	74	100	100	109	348	100

Source: Based on Primary Survey, 2015–16

The table 6.17 shows that the decadal growth trends of rural wage earnings in various sectors reveal that the shift of rural casual workers to the construction sector has been contemporaneous to the positive growth of real wages in this sector (Jatav & Jajoria, 2012). The wage difference between rural and urban areas has been well-documented for decades (Jain, 2014). Since large cities tend to be characterised by higher levels of productivity, real wages are also higher therein. Even in the informal sector, wages are higher due to forward and backward linkages between the sectors. Mitra (2014) argues that economic globalisation has not reduced intra-urban or rural-urban growth differentials. Low income households in large cities are likely to be better off in large cities relative to their counterparts in small urban settlements.

Table 8: Daily Wage Ratio between Construction and Agricultural Sectors

Sr. No.	Wage ratio	No. of Workers	%	Wage Differential	No. of Workers	%
1	0.14	5	1.44	-600	4	1.15
2	0.15	2	0.57	-550	2	0.57
3	0.16	1	0.29	-525	1	0.29
4	0.17	1	0.29	-500	4	1.15
5	0.18	2	0.57	-450	4	1.15
6	0.19	1	0.29	-430	1	0.29
7	0.20	15	4.31	-400	36	10.34
8	0.21	2	0.57	-380	1	0.29
9	0.22	1	0.29	-375	1	0.29
10	0.23	5	1.44	-370	1	0.29
11	0.24	1	0.29	-350	3	0.86
12	0.25	22	6.32	-340	2	0.57
13	0.27	8	2.30	-325	1	0.29
14	0.28	5	1.44	-320	1	0.29
15	0.29	10	2.87	-310	1	0.29
16	0.30	9	2.59	-300	24	6.9
17	0.31	3	0.86	-280	6	1.72
18	0.32	5	1.44	-275	3	0.86
19	0.33	43	12.36	-250	9	2.59
20	0.35	8	2.30	-230	5	1.44
21	0.36	1	0.29	-225	1	0.29
22	0.37	1	0.29	-220	9	2.59
23	0.38	1	0.29	-200	24	6.9
24	0.40	40	11.49	-180	9	2.59
25	0.42	6	1.72	-175	6	1.72
26	0.43	2	0.57	-170	3	0.86
27	0.44	3	0.86	-160	1	0.29
28	0.45	15	4.31	-150	67	19.25
29	0.47	1	0.29	-130	9	2.59
30	0.48	3	0.86	-125	7	2.01

31	0.50	27	7.76	-120	19	5.46
32	0.53	2	0.57	-115	1	0.29
33	0.55	5	1.44	-100	49	14.08
34	0.56	2	0.57	-95	2	0.57
35	0.57	37	10.63	-80	5	1.44
36	0.60	12	3.45	-75	2	0.57
37	0.63	2	0.57	-70	4	1.15
38	0.65	1	0.29	-60	1	0.29
39	0.67	24	6.90	-55	1	0.29
40	0.68	2	0.57	-50	8	2.3
41	0.69	1	0.29	-30	1	0.29
42	0.75	1	0.29	-25	1	0.29
43	0.80	1	0.29	0	6	1.72
44	0.83	1	0.29	50	2	0.57
45	1.00	6	1.72			
46	1.17	2	0.57	Total	348	100
Total		348	100.00			

Source: Based on Primary Survey, 2015–16

The table 6.18 reveals that wage difference varied from Rs. 50 to Rs. 600. This shows very high wage gap between agricultural workers and the construction workers.

Descriptive Statistical Analysis of Key Socio-Economic Variables

Good socio-economic conditions to workers in any country would encourage them to work more productively and help them to contribute in the process of development. The average hours, working in a day was 8 to 9 hours with 30 minutes to 1 hour rest after 4 to 5 hours of works as a lunch time. Majority of workers mentioned that working hours was satisfactory. An analysis of satisfactory level of working-living conditions of workers was done through statistical analysis. The table reveals that across the top row are the requested statistics of N (No. of Respondents), minimum (lowest), maximum (highest), mean (average) and standard deviation (S.D.).

Table 6.19. Summary of Statistics for Key Variables

Sr. No.	Socio-Economic Indicator	Sample Size	Mean	S. D.	Minimum	Maximum
1	age	348	30.20115	8.72142	18	67
2	Household size	348	4.62069	2.083233	1	12
3	Male	348	0.1954023	0.397081	0	1
4	Sector	348	0.158046	0.3653094	0	1
5	Hindu	348	0.8908046	0.3123333	0	1
6	Married	348	0.7816092	0.4137489	0	1
7	ST	348	0.2701149	0.4446583	0	1
8	SC	348	0.2356322	0.4250044	0	1
9	OBC	348	0.4281609	0.4955247	0	1
10	GEN	348	0.066092	0.2488005	0	1
12	Family Profile	348	0.6982759	0.4596671	0	1
13	Illiteracy	348	0.316092	0.4656188	0	1
14	Primary	348	0.2902299	0.4545219	0	1

15	Middle	348	0.1925287	0.3948537	0	1
16	Secondary	348	0.1235632	0.3295564	0	1
17	Above Secondary	348	0.0775862	0.2679045	0	1
18	Unskilled	348	0.5488506	0.4983244	0	1
19	Skilled	348	0.1408046	0.3483207	0	1
20	Semi-Skilled	348	0.3103448	0.4633009	0	1
22	Network 1	348	0.2155172	0.4117727	0	1
23	Network 2	348	0.1063218	0.3086929	0	1
24	Network 3	348	0.0258621	0.1589523	0	1
25	Self-Initiate	348	0.4827586	0.5004222	0	1
26	Contractor helps find job	348	0.8362069	0.3706206	0	1
27	Move without job	251	0.9721116	0.1649822	0	1

Source: Based on Primary Survey, 2015–16

The table 6.19 reveals that the mean age was 30.20, which indicates that average age of workers was 30.2 years and the mean of household size was 4.62, which indicated that average family size of workers was 4.62. These two variables consisted actual value. The mean of family profile was 0.69, which indicated that 69 per cent of the workers were coded as 1(No) i.e. 69 per cent of construction workers was belonged to joint family and the remaining 31 per cent of the workers were coded 0 (Yes) i.e. 31 per cent workers belonged to nuclear family.

The mean of sector was 0.15, which indicated that 15 per cent of workers was coded as 1(No) i.e. 15 per cent of construction workers belonged to the urban sector, and the remaining 85 per cent of the workers were coded 0 (Yes) i.e. 85 per cent workers belonged to the rural sector. The mean of religious profile was .89, which indicated that 89 per cent of workers were coded as 1(No) i.e. 89 per cent construction workers belonged to Hindu religion and the remaining 11 per cent of workers was coded 0 (Yes) i.e. 11 per cent workers belonged to non-Hindu religions such as Muslim, Christian, Buddhist, etc. The mean of family profile was0.69, which indicated that 69 per cent of workers were coded as 1(No) i.e. 69 per cent of construction workers belonged to the joint family, and the remaining 31 per cent of workers were coded 0 (Yes) i.e. 31 per cent of workers belonged to nuclear family. The mean of married was .78, which indicated that 78 per cent of workers were coded as 1(No) i.e. 78 per cent of construction workers were married or separated, and the remaining 32 per cent of workers were coded 0 (Yes) i.e. 32 per cent of workers were unmarried.

Social groups such as ST, SC, OBC and General were constructed as dummy variables such as ST was coded as 1 and remaining others were coded as 0, SC was coded as 1 and remaining others were coded as 0, OBC was coded as 1 and remaining others were coded as 0,and General were coded as 1 and remaining others was coded as 0. Thus the mean value of ST, SC,OBC and general are (coded as 1) 0.27, 0.23, 0.48 and 0.67respectively, which indicated that 27 per cent, 23 per cent, 48 per cent and .7 per cent belonged to ST, SC, OBC and General, respectively.

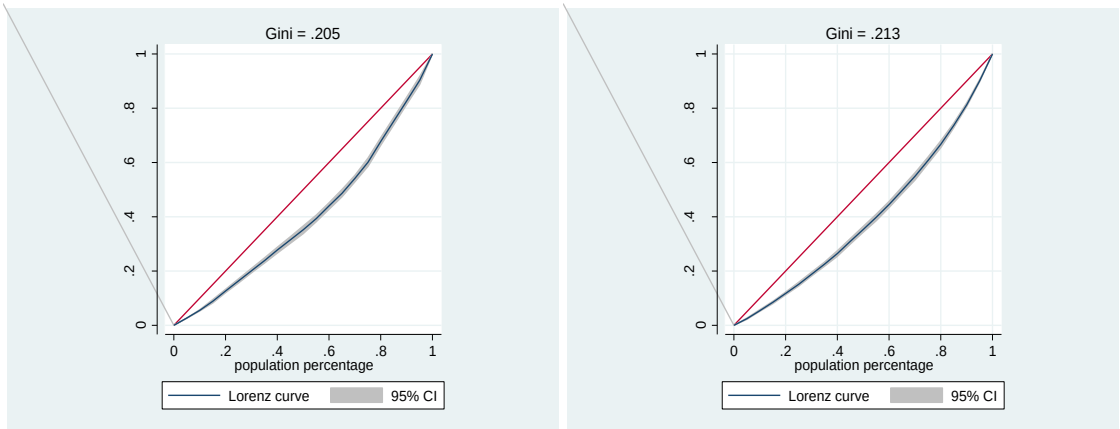
The educational attainments such as illiterate, educated up to primary, middle, secondary and above to secondary were constructed as dummy variable such as illiterate was coded as 1 and remaining others were coded as 0, educated up to primary were coded as 1 and remaining others were coded as 0, educated middle were coded as 1 and remaining others were coded as 0, educated middle were coded as 1 and remaining others were coded as 0, educated secondary were coded as 1 and remaining others were coded as 0 and above to secondary were coded as 1 and remaining others were coded as 0. Thus the mean value of illiterate, educated up to primary, middle, secondary and above to secondary were (coded as 1) .32, .29, .19, .12 and .08respectively, which indicated that 32 per cent, 29 per cent, 19 per cent, 12 per cent and .8 per cent were illiterate, educated up to primary, middle, secondary and above to secondary, respectively.

The activity status such as unskilled, semi-skilled and skilled were constructed as dummy variable such as unskilled was coded as 1 and remaining others were coded as 0, semi-skilled was coded as 1 and remaining others were coded as 0, and skilled was coded as 1 and remaining others were coded as 0. Thus mean value of unskilled, semi-skilled and skilled are (coded as 1) .54, .14 and .32 respectively, which indicated that 54 per cent, 14 per cent and .32 per cent belonged to unskilled, semi-skilled and skilled activity status, respectively.

Gini Coefficient

The most popular measure of inequality is the Gini coefficient, which ranges from 0 (indicating perfect equality or no inequality) to 1 (indicating perfect inequality or highly inequality). It is derived from the Lorenz curve, which shows cumulative proportion of population on the horizontal axis and cumulative proportion of income on the vertical axis. The empirical analysis in this study used data drawn from primary survey of four cities in Gujarat. The trends in wage dispersion among construction workers were examined by using a number of inequality measures. The Gini coefficient varies between zero (indicating no inequality) and one and it is defined as follows:

Figure 6.3: Gini Coefficient for Agricultural and Construction Wages



Source: Primary Survey, 2014–15

A perusal from the figure 6.3 (A) and figure 6.3 (B) indicate that there was nearly the same wage inequality within the agricultural sector and the construction sector, which were 0.20 and 0.21 respectively. It revealed s that wage gap in the construction and agriculture still remained the same. It is clear that Gujarat is experiencing the second (2^{nd}) stage of Lewis model. This is because wage gap in both sectors remained the same as indicated through Gini coefficient.

Regression Analysis

The estimated equation was based on Mincerian equation which is conventionally applied in the field of labour economics. The natural logarithm of daily wages in construction sector is given as

In $W_C = \beta_0+\beta_1 W_A+\beta_2$ Age$+\beta_3$ Age^2 $+\beta_4$ Experience$+\beta_5$ Gender$+\beta_6$ Category $+\beta_7$ Educational Attainment$+\beta_8$ Religion$+\beta_9$ Nature of Employment+ e

Dependent Variable

W_C = Log daily wage rate in Construction Sector

Dependent Variable

W_A= Log daily wage rate in Agriculture Sector

Age= Age of Respondent

Age_square= Square of age

Exp_cst= Experience in construction sector

Gender Profile

d_male=1 if the respondent is male, = 0 otherwise

(Male is taken as the reference category for gender profile)

Religious Profile

d_hindu=1 if the respondent is Hindu, = 0 otherwise

(Hindu is taken as the reference category for religious profile)

Social Category

d_st= 1 if the respondent is schedule tribe, = 0 otherwise

d_sc= 1 if the respondent is schedule caste, = 0 otherwise

d_obc= 1 if the respondent is other backward caste, = 0 otherwise

d_gen=1 if the respondent is general caste, = 0 otherwise

(SC is taken as the reference category for social group)

Educational Attainment
d_illi= 1if the respondent is illiterate, = 0 otherwise
d_prim_mdrs= 1if the respondent is educated below primary or madarsa, = 0 otherwise
d_a_pri_b_sec = 1if the respondent is above primary or below secondary, = 0 otherwise
d_a_sec= 1 if the respondent is educated above secondary, = 0 otherwise
(d_illi is taken as reference category for educational attainment)

Nature of Employment
d_unskilled=1 if the respondent is unskilled, = 0 otherwise
d_semi_skilled=1 if the respondent is semi-skilled, = 0 otherwise
d_skilled=1 if the respondent is skilled, = 0 otherwise
(d_unskilled is taken as reference category for nature of employment)
Migration
d_ city_destination, (workers' origin and destination place are same.)
d_ ru_migration, (workers belong to rural area of Gujarat as well as rest of the country)
d_ur_migration, (workers belong to urban area, excluding destination place)

Table 10: Determinants of Mincerian Regression Analysis

Dependent Variable: Log Daily Wage in Construction Sector		
Variables	**Coefficient**	**(Standard Error)**
ln_ag_wage	0.409594***	(0.0445359)
age	0.010575	(0.0102119)
age_square	-0.00013	(0.0001466)
dum_gdr	-0.09739**	(0.0407882)
d_gen	-0.02238	(0.0640056)
d_obc	-0.03557	(0.0362419)
d_sc	-0.1159***	(0.0403553)
d_prim	0.101664**	(0.0397493)
d_middle	0.118461***	(0.0439895)
d_secon	0.083995*	(0.0502753)
d_ab_sec	0.043143	(0.0591114)
d_skilled	0.458796***	(0.0458322)
d_semi_skilled	0.234179***	(0.0370634)
d_ru_migration	-0.25797***	(0.0457099)
d_ur_migration	-0.33444***	(0.0880984)
_cons	3.672269***	(0.2773776)
No. of Observation	348	
Pro>F	0	
R-squared	.5375	
Adj R-squared	.5166	

Source: Author's Calculation
Note: Standard error is in parentheses. Significance level at 10% is denoted by *, 5%**, and 1%***

Reference category: d_sc, d_primary, d_unskilled, d_ illiterate, d_ur_natives, d_gdr=female=1,

Regression Result

The table 6.20 reveals that daily wages in agriculture, gender, category, education, nature of employment, and rural-urban migration levels significantly influenced the daily wage rate in the construction sector. The regression result from primary survey data reveals that the wage rate in the agricultural sector exercised significance impact on wage rate in the construction sector. It shows that one per cent change in agricultural wage will increase 41 per cent in the construction wage. The expected sign was obtained for the coefficient of age (positive) implying the probability of daily wages increased with age within the age group of 15–59. The expected sign of age square (-), which postulates that with age workers gained experience that in

turn enhanced their productivity, and consequently their chance to get higher wages. But age and age square were not significant. The gender dummy represents 1 for females and 0 for males, which were highly significant. Given the existing economic structure in society, female workers received lesser wages as compared to male workers in the construction sector.

The household size of workers significantly influenced on daily wages in the construction sector. Further, the results also suggest that compared to the workers from STs, SCs are significantly receiving lower wages in construction. ST construction workers received more wages as compared to SC workers. This is because majority of ST workers belonged to Dahod district of Gujarat. They were local workers and worked on higher wage as compared to SC migrants. Nevertheless, compared to STs, the wages of OBCs and General were not significantly different in construction. Married workers received more wage than unmarried workers and widows received lesser wages.

Another important determination of daily wage rate was education. Illiterate workers were received lesser wages as compared to educated workers though only primary and middle workers variables were significant. Again, compared to illiterate workers, primary, middle and secondary (9^{th} class) educated workers are significantly received more wages in the construction sector. Skills are the most important indicators of wage determination in the construction sector. Three dummies were constructed and unskilled were taken as the comparison group. Compared to unskilled workers, semi-skilled and skilled workers significantly received more wages in the construction sector.

Economic projection

A question that may be asked in this regard is: what level of economic growth would be required for the economy to be able to absorb its surplus labour within a reasonable time 2030 frame (say 0–15 years)?In order to address the question of absorbing surplus labour as mentioned above, one would first need an estimate of that and then make the projections of employment needed to absorb the surplus labour. In the absence of a national estimate of surplus labour based on some rigorous methodology, an attempt has been made here to provide an illustrative estimate of surplus labour and the GDP growth required to absorb the latter within a 15 years period.

III. Conclusion

In the unorganised construction sector, the wage rate is not determined by the marginal productivity of workers. It is fixed by negotiations and settlements between the employer/contractor and workers. However, the supply of and demand for workers also plays a significant role in wage determination in the construction sector. From the data analysis, it is clear that wage differences and inequality do not occur only due to differences in the level of workers' skills and experience, but also according to whether the work is in rural or urban areas, town to city, and whether it is permanent, temporary, contractual, casual workers etc. for construction workers, geographic location plays the most important role in determining wage rate. There is a huge wage gap between village and town, town and city, city and metropolis. The study concludes that overall wage inequality within socio-economic indicators (such as gender, family, age group, social category) is not very high. This is because the value of Gini coefficient is not very high, which implies that wage inequality among construction workers is not very high. But wage inequality among construction workers is very high between village and town, town and city, casual and permanent workers, unskilled and highly skilled workers. However, educated and experienced workers receive higher wages. High physical stamina and risk-taking behaviour also helps workers increase their daily wages in construction. Training initiatives will help works find better employment with higher wages. Therefore, training facilities are not only necessary and also essential for the optimum utilisation of labour forces. It can also reduce the wage disparity and inequality between unskilled and skilled workers. Hence, it is suggested that the government, NGOs like SEWA, institutes like the V. V. Labour Institute and Mahatma Gandhi Labour Institute, and construction firms offer more training and development programmes for construction workers. It may be possible to abolish inequality and disparity in workers' wages through the effective implementation of education and training. This could increase the productivity of workers and ensure the efficient utilisation of human resources. With technological advancement, wage difference and inequality are widening in construction. As, technologies replace the services of unskilled workers and in tandem with an increase in the demand for skilled workers.

Thus, instead of leaving wage determination to the market system, there is a need to regularise wages and frame a proper wage policy that is beneficial to both capital and labour. Secondly, the government can also revise the minimum wage rate on the basis of construction workers' performance annually. Thirdly, it is necessary to link construction workers with other alternative seasonal job opportunities to enhance their wages and income.

The study concludes that there is no surplus labour in rural agricultural sector, while there is huge surplus labour in the urban sector of Gujarat. As a result, rural sector is experiencing shortage of labour. It should be borne in mind that population is huge and that there is still a substantial labour surplus, which could be transferred

between rural and urban industries. However, the labour shortage is a structural problem in rural area and India has an irrational structure, and at the same time there is a shortage of workers.

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