Employment Pattern, Skills and Training Issues among Informal Sector Workers in Mumbai Metropolitan Region

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ABSTRACT

An informal sector in any economy provides different kinds of employment opportunities to people. In Mumbai Metropolitan Region, the female are more involved in regular jobs as compare to the causal and self-employed workers. The secondary and college studied male and female are found more in regular jobs. The high school studied male and illiterate female are working on causal jobs. The causal jobs do not require more education and skills. In self-employed category, the secondary school studied male and high school studied female are found more. The monthly income of workers involved in regular jobs is much higher than the causal and self-employed workers. The moderate malnourished females are found more as compare to the male in causal and self-employed category. The multi nominal logit regression model shows that the causal workers have positive correlation with illiterate male but it is negatively co-related with high school studied male, illiterate and secondary studied female. The monthly income, source of water, refrigerator and condom use is negatively co-related with causal workers as compare to regular workers. The self-employed workers have negative co-relation with monthly wage, source of water and watch cinema regularly as compare to the regular workers. Therefore government must provide infrastructural facilities in all slums of region. The infrastructural facilities such as water supply, electricity, sewage and solid waste collection must be provided in all slums of region. Causal workers must be provided the vocational training to start their own business. Commercial and co-operative banks must provide loans to poor people of slums. Females must be encouraged to take loan and start small business. Government must provide low cost housing to causal and self-employed workers in region. Such policies will certainly improve standard of living of informal sector workers in region.

KEYWORDS: *health, poverty, safety*

JEL CLASSIFICATION: *J41, J42, J43*

INTRODUCTION

In developing countries a large proportion of employment and output generation are concentrated in the informal sector. Even in countries experiencing strong economic growth, the informal sector often remains large and relatively unproductive, pulling down labor productivity and aggregate economic growth (Moreno Monroy et.al 2014). In India, the governance system is weak and allows informal transaction to flourish in the presence of high poverty. As a result, a variety of low cost goods and services, which requires a little investment but provide employment to a large number of uneducated and otherwise jobless

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people, thrive in the informal sector (Maiti, D. and Marjit S. 2009). The vast informal sector in India is increasingly considered as a dispersed development engine. It is also argued, though sizeable portion of informal sector exists independent of formal sector, a large segment bears a complementary relationship with these formal productions (Chakrabarti & Kundu, 2009). The Government of Maharashtra (GoM) has encouraged informal sector growth without much regulation. Mumbai city is a financial capital of country. Many workers migrate to city for employment purpose. They join informal sector jobs due to lower education, skills and experience. In informal sector, the workers education and health status decides the income pattern. The illiterate workers do not have skills and they often end up with causal and self-employment nature of jobs. Most of the causal and self-employment workers are poor and they do not have capital. The income earned from causal jobs and self-employment is very less. In causal jobs, there is occasional work for labor and in rainy season, there is no work and income at all. It affects the regular income and consumption expenditure of family. The self-employed workers work for more hours but yield very less income. The profit margin is very low in self-employment activities. It affects the overall expenditure pattern of the workers.

Women are working in informal sector as construction laborer, vegetable venders, sweepers etc. They wake up early in the morning cook food for the family and carry drinking water. The distance of house from common water tab is more than it is laborious activity for the women. In slums, government has provided common water supply taps. Therefore there is long queue for drinking water. Women have no choice but to carry drinking water from far places at morning and evening. They have to walk long distance for income generating activities. The daily work is located far away from slums. Such work sites are continuously changing in city. The causal work time is not flexible. Most of the causal jobs required the workers to present for more hours in a day. But most of the women workers have to carry drinking water, care of members and children and cook for family. If the children are small then they are without care at home. The child care facility is not available at slums and at work place. But contractors do not understand the socio-economic characteristics of women workers. The causal nature of job does not provide any kind of security to women workers. If they fall sick and remain absent for one or two days, the contractors easily replace such workers. If the contractor's site work gets completed then all workers need to move to another site. The women workers are not given provident fund, contract, maternity leave, child care facility at causal work. The causal women workers do not get post natal care leave. Most of the women join causal work immediately after their delivery. The health care facilities are overcrowded and visiting such facilities required to wake up early in the morning, travel to hospital, stand in a long queue and buy medicines. Such health care cost is too high for family and therefore they cannot afford to visit health care facilities. Traveling in city is very difficult because of heavy traffic and congestion. Women along with their children cannot travel and visit to health care facility regularly. Health care staff does not visit to slum houses. The infections are rampant and the small children often fall sick in slums. But the women workers do not visit health care facilities. They cannot take leave and provide medical care to children. Most of the time, children are left without medical care. Usually they are with relatives and friends.

In unorganized sector, gender divergence of income and work exists in region. The women workers in unorganized sector lag behind the males in terms of level and quality of employment. The women workers have weak bargaining power in informal sector. In many cases, the women workers are unaware of their rights. It can be easily observed that the

women working in unorganized sector are living a life far below from satisfaction (Mittal, 2012). But in general, the informal sector workers are living in abject poverty in region. Most of workers in the unorganized sector barely manage a subsistence existence due to poverty. There is rising cost of food and private healthcare to these workers. Therefore there is huge indebtedness of households in the unorganized sector in region. Government does not provide health insurance to these workers. The causal and self-employed workers spend less income on food. The less qualitative and quantitative food and infections deteriorate their health status. The workers strength is the main determinant of the daily wage. The poor health status does not allow workers to work more hours and earn more income. Malnourishment among them forces them to fall under poverty trap. The major objective of this paper is to understand the employment pattern among informal sector workers in region. Second objective is to study the income, education, asset holding and health status of workers in region. Therefore the first part of paper explains about the data and methodology of paper. The second part deals with informal sector workers and socio-economic background. The second last part deals with multi-nominal logit regression analysis. The last part of paper deals with policy implication and conclusion.

1. DATA AND METHODOLOGY

For this study, we have collected primary data of slum households in Mumbai Metropolitan Region. We have collected 767 households' data from eight slums such as Mankhurd East and West, Govandi East and West, Kalwa, Koparkhairne, Rabale, Turbhe, Vashi and Ghatkopar. The household heads and women are interviewed during survey. The questionnaire comprises as different questions related to household members, nature of job of members, income and expenditure of family, fertility behavior, household assets, media exposure and illness of members. The primary data is collected in May-June 2014. We have analyzed data in SPSS@20 and STATA@12 software.

1.1 Economic model

We have developed economic model for informal sector workers in Mumbai Metropolitan Region.

$$\sum_{t=1}^{i=n} T_w = (C, E, W, T) \quad (1)$$

Total workers of region at time t are classified as workers of Central, Eastern, Western parts of Mumbai city and Thane district.

$$\sum_{t=1}^{i=n} T_{MMR} = (R, C, S_e) \quad (2)$$

Total work force of informal sector in Mumbai Metropolitan Region comprises as the regular (R), causal (C), self-employed (S_e) workers. The different age groups of workers are consists of regular, causal and self-employment workers.

$$IW_e = (I, P, S, Hs, C) \quad (3)$$

Each informal sector workers education (W_e) is different. We have classified workers education as Illiterate (I), Primary (P), Secondary school (S), Higher secondary (Hs), College (C).

$$IW_y = (Y_r, Y_c, Y_{se}) \quad (4)$$

Informal sector workers of different category get different income. The income earned by regular workers (Y_r) is stable and higher as compare to self-employed (Y_{se}) and causal workers (Y_c). Income of the workers is sole determinant of standard of living.

$$BMI_{r,c,se} = (S, M_o, M_i, N, O_1, O_2, O_3) \quad (5)$$

BMI of the informal sector workers is significant determinant of the income. The regular, self-employed and causal workers have different BMI. The BMI of workers is categorized as Severe(S), Moderate (M_o), Mild (M_i), Normal (N), Obese1 (O_1), Obese2 (O_2), Obese3 (O_3). We have categorized malnutrition among workers as excluding normal category.

$$IA_h = (P_a, E_a) \quad (6)$$

The informal sector workers have different physical and electronic assets at home. Such assets are classified as follows.

$$P_a = (W, F, b, S_w) \quad (6a)$$

The household's physical assets (P_a) are categorized as watch, fan, bed, and sewing machine (S_w).

$$E_a = (R, T_p, R_e, T_e, B, C) \quad (6b)$$

The electronic assets (E_a) in any house are classified as radio, telephone, refrigerator, television, bike and car. The workers in informal sector are using the traditional and modern contraceptives as family planning methods.

$$C_o = (C_m, P, I, W, P_a) \quad (7)$$

The contraceptive use (C_o) is categorized as modern and traditional contraceptives. The modern contraceptives are condom, pills and IUD. The traditional methods of contraceptives are categorized as withdrawal method and periodic absentee method. Workers use of best contraceptive method is based on availability of method and knowledge.

2. INFORMAL SECTOR IN METROPOLITAN REGION

The informal economy in Mumbai Metropolitan Region is defined on the basis of employment structure and form. Informal sector is very vast and there is limited data available of total number of workers and nature of activities. Forms of informal employment include street vendors, paid domestic workers and at home producers of clothing and other manufactured goods. Informal jobs mostly fall outside the domain of the government's labor market regulation. The informal sector workers do not function with the types of legal protections concerning the number of working hours, health and safety or with the types of mandated benefits that would normally be a feature of formal employment

opportunities in large ongoing private sector firms or in the public sector (Raihan, 2010). We have defined self-employed, regular workers and causal workers as follows. Self-employed workers are defined as the persons who operated their own enterprises or were engaged independently in a profession or trade on own-account or with one or a few partners. The important feature of the self-employed is that they have autonomy for carrying out their own operation. The regular wage earners are persons who work in non-farm enterprises and in return receive salary or wages on a regular basis. The casual wage laborer means a person, who is casually engaged in non-farm enterprises and in return, received wages according to the terms of the daily or periodic work contract (Sharma Khema 2012). A large proportion of the workers engaged in the metropolitan region are migrants from rural areas with poor educational, training and skill background. They are employed in low-paying, semi-skilled or unskilled jobs. The productivity and earning levels are low and workers do not find full time work. The working environment is not conducive and working hours are long. Most of the conditions of decent employment such as paid leave, pension, bonus, medical support and health insurance, maternity leave benefits, compensation against accident are nearly non-existent (Mohapatra, 2012). Most of the women are working in informal sector in region. Domestic service is a major and growing informal sector activity, largely occupied by women. Illiteracy, low caste and migrant status, lack of alternative employment opportunities make domestic worker vulnerable to various exploitations. The long working hour's low pay, absence of job security and low social status define the occupation. Although these are the characteristics of many informal sector occupations, the absence of legal protection makes domestic workers particularly vulnerable to many labor market exploitations (Neeta N. 2009). We need to understand the informal sector workers in Mumbai Metropolitan Region.

3. PATTERN OF INFORMAL SECTOR EMPLOYMENT

We have categorized the regular, causal and self-employed workers in Mumbai Metropolitan Region (MMR). The causal workers are hired for short period. The regular workers are those that are directly hired by the firm and get the specified social security benefits. They are subject to retrenchment and compensation regulations under the industrial disputes Act 1947 (Ramaswamy, 2009). The self-employed workers have small own business. The causal workers are hired by contractor or small enterprise for short period of time.

Table 1. Type of employment among workers in MMR (Percent)

Suburb	Regular		Causal		Self employed	
	M	F	M	F	M	F
Mankhurd(E)	9.86	33.33	61.97	26.67	28.17	33.33
Mankhurd(W)	23.53	10.00	57.35	75.00	19.12	5.00
Govandi(E)	25.00	0.00	50.00	42.86	25.00	14.29
Govandi(W)	13.33	33.33	66.67	26.67	20.00	13.33
Kalwa	11.25	42.11	65.42	36.84	23.33	7.89
Koparkhairne	19.15	0.00	77.66	65.00	3.19	5.00
Rabale	8.51	35.00	76.6	30.00	14.89	0.00
Turbe	2.63	6.25	92.11	43.75	5.26	0.00

Suburb	Regular		Causal		Self employed	
	M	**F**	**M**	**F**	**M**	**F**
Vashi	7.41	26.32	77.78	26.32	14.81	0.00
Ghatkopar	29.41	0.00	35.29	0.00	35.29	0.00
Total	13.13	22.65	68.7	39.23	18.17	7.18

Source: Calculated by author from primary data

We found 29.41 percent male are in regular work in Ghatkopar. In Rabale, the 35 percent female workers found in regular jobs. Females from Koparkhairane and Ghatkopar are not found in regular jobs. In Turbhe, 92.11 percent male found in causal job. From Turbhe slums, most of the male workers work on different construction sites. Total 75 percent women in Mankhurd (W) are found in causal jobs. We have not found any women working as causal worker in the Ghatkopar. Most of the causal workers are coming from outside area in this suburb. Nearly, 35.29 percent men are self-employed in the Ghatkopar. The Ghatkopar suburb provides number of small scale opportunities to workers. Population is higher therefore there is no much risk in stating a small business. In Mankhurd (E), 33.33 percent female are self-employed. Women in this area have small scale economic activities such as vegetable vender, shops of garment and general stores etc. We have not found self-employed women in Rabale, Turbhe, Vashi and Ghatkopar. We found that 13.13 percent male have regular jobs in different suburbs in region. Nearly, 22.65 percent women have regular jobs. Women do not get regular jobs in different suburbs due to low education, skills and experience. Nearly 68.70 percent male have causal jobs in region. It means majority men find casual jobs in region. But only 39.23 percent female have causal jobs in region. Women are less likely to do the causal jobs. There are only 18.17 percent male are engaged in the self-employment. There are 7.18 percent female are engaged in the self-employment. It is the lowest percentage of female found in different kinds of employment. Most of the women prefer regular jobs in region. The women engaged in regular employment are found to have higher levels of autonomy both in terms of participation in and control over decision making than those at paid causal employment. Surprisingly, self-employed women seem to have higher autonomy in terms of participation in decisions than those at regular and causal employment. Women take up self-employment even when they are not able to find causal employment. Most of the self-employed women are in informal sector that experience almost similar forms of degree of per cariousness and insecurities found in causal employment. The only major difference is that self-employment women seem to enjoy some degree of functional autonomy in employment which is unavailable in causal employment (Jose, 2008). We have also categorized different workers according to age group.

Table 2. Age wise informal sector workers in MMR (Percent)

Nature of job/Age	Sex	15-25	26-35	36-45	46-55	56-65	66-75
Regular	M	26.51	31.33	24.10	14.46	2.41	1.20
	F	23.40	29.79	31.91	12.77	2.13	0.00
Casual	M	22.97	40.93	24.13	8.30	3.09	0.58
	F	22.54	39.44	16.90	15.49	5.63	0.00

Nature of job/Age	Sex	15-25	26-35	36-45	46-55	56-65	66-75
Self employed	M	14.47	46.71	26.32	9.87	2.63	0.00
	F	8.33	33.33	33.33	0.00	8.33	16.67
Total	M	21.65	41.04	24.57	9.30	2.92	0.53
	F	21.54	35.38	23.85	13.08	4.62	1.54

Source: Calculated by author from primary data

For regular income and job security, the workers must have regular job at early age. It certainly improve standard of living of workers. The 31.31 percent male in 26-35 age group are in regular jobs. The 31.91 percent female in 36-45 age groups are regularly working. The 40.93 percent male and 39.44 percent female of 26-35 age group are in causal jobs. They are unskilled workers and easily find jobs in local area. The 46.71 percent male of 26-35 age group are in self-employment. The 33.33 percent female of 26-35 and 36-45 age groups are in self-employment. In our sample, 41.04 percent male workers of 26-35 age groups are more and they are involved in different jobs. The 35.38 percent female of 26-35 age group are more. It is economically most active population as compare to other age category of workers.

Education helps workers to acquire skills. Highly educated workers can spend some time in learning different skills. The highly educated workers understand about job requirements and training as compare to less educated workers. Highly educated workers have high ability to read advertisement, apply for regular job and work efficiently. They can also start new business and take risk to expand it.

Table 3. Educational status and nature of work (Percent)

Educational status	Regular		Casual		Self-employed	
	M	F	M	F	M	F
Illiterate	12.85	46.23	76.07	43.40	11.08	10.38
Primary	16.88	58.33	64.94	27.78	18.18	13.89
Secondary	17.65	57.58	61.96	30.30	20.39	12.12
Higher secondary	21.05	50.00	73.68	33.33	5.26	16.67
College	66.67	0.00	16.67	0.00	16.67	0.00
Total	15.52	50.83	69.63	37.57	14.85	11.60

Source: Calculated by author from primary data

There are 66.67 percent male engaged in the regular work and such workers have college education. It is easy for college educated worker to find regular job in region. The 58.33 percent females have primary education and they are engaged in the regular jobs. There are 76.07 percent male and 43.40 percent female are illiterate and they are working as causal labors. We have not found college educated female in causal jobs. The college education to female provides knowledge and skills. Therefore they can work in formal sector with high salary. The 20.39 percent male are secondary studied but they are self-employed. Only 16.67 percent female have high school education and they are engaged in

self-employment. The self-employed females are very less in region. Usually women take less risk and start own small business.

Highly educated workers can earn more income. The regular job provides good source of income and they can work efficiently on regular tasks which are assigned to them. Irregular causal jobs do not provide fixed and continuous source of income. It is more of seasonal income. In self-employment, the regular income can be earned but it is decided by type and nature of business.

Table 3 Level of income and employment status (Percent)

Monthly income (Rs)	Regular	Causal	Self employed
500-4500	14.54	63.44	22.03
4500-9000	12.80	68.72	18.48
9000-13000	20.26	63.40	16.34
13000-17000	17.24	68.97	13.79
17000 –Above	30.00	46.67	23.33

Source: Calculated by author from primary data

For improving standard of living of workers in region, the household's income is important. Nearly 30.00 percent workers in regular job category are getting seventeen thousand and above salary. In causal jobs, 68.97 percent workers get Rs.13 to 17 thousand incomes per month. In self-employment category, only 23.33 percent workers got Rs.17 thousand and above monthly income. We have more workers of causal work. The body mass index is the determinant of wage in causal jobs. But most of the workers in causal jobs and self-employment do not get higher income. It is ultimately effects on their calorie intake and health care. Good health status required calories, vitamins, carbohydrates in diet. But less income does not allow workers to buy fruits, vegetables, eggs, chicken etc. They often have less nutritious food for more number of people. Therefore per capita food and calorie intake availability is low. The qualitative food is not available to improve body mass index.

Table 4. Body Mass Index and type of employment status (Percent)

	Regular		Casual		Self employed		Total	
BMI	M	F	M	F	M	F	M	F
Below 16	10.64	7.41	7.86	2.50	8.33	0.00	8.33	4.17
16-16.9	4.26	7.41	3.06	0.00	1.39	0.00	2.87	2.78
17-18.49	8.51	7.41	11.35	5.00	16.67	40.00	12.07	8.33
18.5-24.9	63.83	48.15	55.90	67.50	59.72	60.00	57.76	59.72
25-29.9	10.64	14.81	16.16	15.00	8.33	0.00	13.79	13.89
30-39.9	2.13	7.41	5.68	5.00	5.56	0.00	5.17	5.56
40- Above	0.00	7.41	0.00	5.00	0.00	0.00	0.00	5.56

Source: Calculated by author from primary data

Nearly 10.64 percent male in regular jobs have BMI below 16. Such workers cannot do hard tasks at work place. But still they are working and earning income. Total 14.81 percent

female in regular jobs have 25-29.9 BMI. They are under obese one category. Total 16.16 percent male and 15 percent female are in causal jobs and they have 25-29.9 BMI. The 8.33 percent self-employed male have below 16 BMI. Such workers are malnourished but still involved in self-employment. Nearly 40 percent female have BMI between 17-18.4 and they are engaged in self-employment. They are mild malnourished. We found 57.76 percent male and 59.72 percent female are in the normal BMI. The incidence of malnutrition among workers is very high. The physical and electronic asset holding helps workers to improve health and standard of living.

Table 5. Asset holding among workers (Percent)

Household assets	Regular	Causal	Self employed
Bed	26.14	11.63	16.98
Watch	19.32	14.29	22.01
Fan	80.68	70.41	93.08
Bicycle	14.77	3.88	6.29
Swing Machine	2.27	0.82	3.77
Radio	0.00	0.61	1.26
Telephone	27.27	27.96	39.62
Refrigerator	2.27	0.00	3.77
Television	60.23	47.14	67.30
Bike	2.27	3.06	2.52
Car	1.14	0.00	1.26

Source: Calculated by author from primary data

The physical and electronic asset holding is lower among informal sector workers. The 26.14 percent regular workers have bed in house. Total 22 percent self-employed workers have watch in house. The self-employed 93 percent workers have fan in house. The 14.77 percent regular workers have bicycle in house. Bicycle ownership increases the mobility in surrounding area of male workers. Only 3.77 percent self-employed workers have swing machine in house. Regular workers have not owned radio. Radio in house is useful for listening news and music. Nearly 39.62 percent self-employed workers have owned the telephone. Causal workers have not owned refrigerator. Ownership of refrigerator certainly helps to preserve food for long time and improve health status of all household members. But poverty does not allow them to purchase such asset. Only 47.14 percent causal workers have owned the television. There are number of programs on television. Workers must watch such programs to improve their knowledge. But irregular and insufficient income does not allow such workers to buy television. Only 2.27 percent regular workers have owned bike. The ownership of bike improves the mobility of workers in suburbs. Causal workers have not owned car. Poverty does not allow them to buy car.

Modern contraceptives allow workers to provide space among children and limit fertility. Causal and self-employment workers do not have time to visit health care facilities. Health workers do not visit slums and there is no possibility that workers will meet at home. Causal and self-employed workers do not have knowledge of modern contraceptives. They often end up with using traditional contraceptives. The failure rate of traditional contraceptives is higher.

Table 6. Contraceptive use among workers (Percent)

Type of contraceptive	Sex	Regular	Causal	Self employed
Condom	M	55.41	41.58	46.76
	F	19.81	10.37	17.99
Pills	M	0.00	0.00	0.00
	F	12.77	12.50	29.65
IUD	M	0.00	0.00	0.00
	F	8.51	2.86	31.35
Withdrawal method	M	35.41	51.58	46.76
	F	61.70	55.36	40.00
Periodic absentee	M	8.51	17.86	22.69
	F	22.97	16.84	20.86

Source: Calculated by author from primary data

There are 55.41 percent male in regular jobs are using the condom. The 19.81 percent women in regular job are using the condom for family planning. Such workers have knowledge of modern contraceptive. Therefore the use of modern contraceptives is also more. There are 29.65 percent self-employed female are using pills for family planning. Nearly 31.35 percent female in self-employment are using the IUD as family planning. The 51.58 percent male of causal work are using the withdrawal method of family planning. They are dependent on traditional method of contraceptives because of lack of knowledge and availability of method. The 61.70 percent female of regular job are using the withdrawal method as traditional method of family planning. The 22.69 percent self employed male are using the periodic absentee method of family planning. The regular 22.97 percent female workers are using the periodic absentee method of family planning. There is also need to examine the income and education of workers and use of different contraceptives. We have already explained that the income of the workers differ from different jobs. The per capita income of the workers is the one determinant of education. Higher education may have high income for workers.

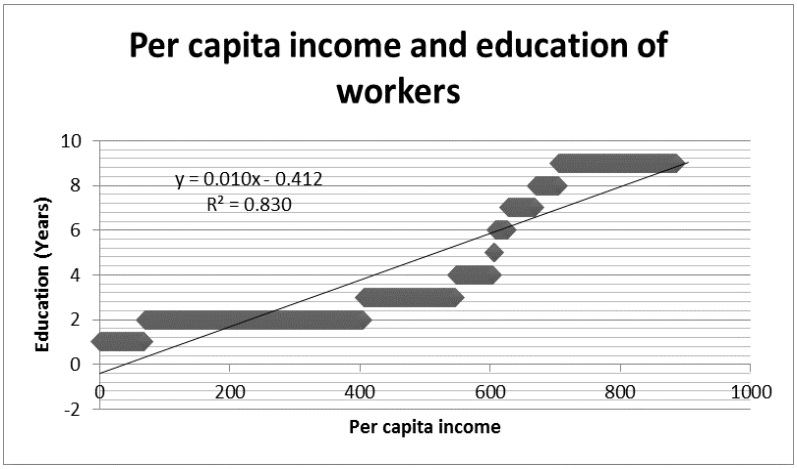

Figure 1. Relationship between per capita income and education of workers
Source: author

The diagram shows that there is positive and significant relationship of per capita income and education of informal sector workers. As education of the workers increases, the per capita income also increases. At two years of education, the per capita income is only Rs. 200 per month. As the education level increases from four years to eight years, the per capita income also increases up to Rs.800. Above eight years of education, the per capita income increases beyond Rs.800 monthly. Therefore there is positive co-relation of education and per capita income.

4. REGRESSION RESULT

We used multinomial logit regression to examine the socio-economic characteristics of each type of workers in Mumbai Metropolitan Region. Such regression helps to find the co-relation between different types of workers. Based on nature of dependent variable, we have used best suitable econometric model for this study. There are different types of regression models but multi-nominal logit is the best fit regression for this study. We have compared the workers of regular jobs with self-employment, causal workers.
The multi-nominal logit model is defined as follows.

$$\Pr(y_i=j) = \frac{\exp(X_i B_j)}{1+\Sigma_j^J \exp(X_i B_j)} \quad (8)$$

and,

$$\Pr(y_i=0) = \frac{1}{1+\Sigma_j^J \exp(X_i B_j)'} \quad (9)$$

Where, for the i^{th} worker, y_i is the observed outcome and X_j is a vector of explanatory variable. The parameters B_j are estimated by maximum likelihood. The positive and negative parameters are compared with the reference category workers of regular jobs (Greene, W.H.2003). The results are presented in the following table.

Table 7. Regression results of causal and self employed workers

Variables	Causal vs. regular jobs		Self employed vs. regular jobs	
	Co-efficient (Std error)	Z test	Coefficient (Std error)	Z test
Sex	-0.22(0.37)	0.59	-1.41 *(0.54)	-2.62
Male illiterate	0.57 **(0.24)	2.36	0.25 (0.27)	0.91
Male high school	-1.71***(0.97)	-1.76	-1.46(1.22)	-1.20
Female illiterate	-1.15*(0.42)	-2.70	-1.32 ***(0.70)	-1.88
Female secondary	-1.47*(0.49)	-2.98	-0.52(0.64)	-0.81
Wages	-0.00***(0.00)	-1.91	-0.00(0.00)	-1.52
Private health treatment	0.35(0.22)	1.60	0.47***(0.25)	1.84
Source of water	-0.54*(0.24)	-2.25	-0.01(0.28)	-0.04
Bed	-0.68*(0.27)	-2.49	-0.48(0.32)	-1.50
Fan	-0.02(0.28)	-0.09	1.38*(0.41)	3.37
Refrigerator	-2.50(1.26)	-1.99	0.40(0.87)	0.46
Watch Cinema	-0.22(0.24)	-0.90	-0.53***(0.28)	-1.90
Take Milk	0.53(0.67)	0.79	17.16*(0.46)	36.54

Variables	Causal vs. regular jobs		Self employed vs. regular jobs	
	Co-efficient (Std error)	**Z test**	**Coefficient (Std error)**	**Z test**
Use Condom	-0.82*(0.33)	-2.48	-0.16(0.35)	-0.46
Constant	1.71*(0.72)	2.36	-17.37(0.88)	0.78
	LR chi ^{2} =180.93 Prob>chi ^{2} =0.000		Pseudo R^2=0.1168 Log likelihood= -684.033	

- *significant at 1 percent ** significant at 5 percent *** significant at 10 percent

Source: author's calculation

Women are less likely to involve in self-employment. They do not take much risk in small business. It is less profit earning at initial stage. Therefore it is negatively co-related and statistically significant. The illiterate males are engaged in causal nature of jobs. It is unskilled job and do not require any expertise. It is assistance type of job. Those male workers have high school education; they are not involved in causal type of jobs. High school education provides some employment opportunities to workers. Workers acquire skills and therefore they do not perform causal jobs. It is statistically significant and negatively co-related. Illiterate female do not involve in causal nature of jobs. It is negatively co-related with permanent job and it is statistically significant. Similarly if the women are secondary school studied then they do not involve in causal nature of job. The wages of the causal workers are negatively co-related to permanent workers. Causal workers get irregular payment and work. It depends on the availability of work. Most of the self employed workers get treatment in private hospitals. It is statistically significant and positively co-related. Self employed workers get good income from their jobs. They use such income for personnel health care. Health care facilities in public hospitals are not good and standard. Therefore they do not prefer to go in such facilities. Causal workers do not have safe and consistent source of drinking water. They bring water from common tap or stand post. Water is provided for particular time by water supply department. The source of water is negatively co-related and statistically significant. Causal workers do not have bed in house. Causal workers do not get the regular work and income. Such workers do not have good houses and they live in slums. Therefore bed at home is negatively co-related with nature of job. Refrigerator ownership is negatively co-related with causal labor. Causal labors do not have money to buy refrigerator. The refrigerator required space, electricity. Self-employed workers watch cinema regularly. They have money and get time to watch cinema. Self-employment workers drink milk regularly. Drinking milk is good preference for their health. They earn good income therefore they drink milk. It is statistically significant and positively co-related. Causal workers do not use condom as modern contraceptive method. It is statistically significant and negatively co-related. Most of the women and men use traditional methods of contraceptives. They do not know how to use the modern contraceptive methods and they are not available in slums.

6. POLICY IMPLICATION AND CONCLUSION

Informal sector in region is very wide and it comprises of different workers in different sectors. In the regular jobs, female workers are more in region. In Ghatkopar, male are more involved in regular jobs. In Kalwa, female are working more in regular jobs. In causal jobs, male are more involved in Turbhe. The female in causal jobs are more in Mankhurd. The male in the Ghatkopar and female in Mankhurd (E) are more the self-employed category. The college studied male and the secondary studied female are more in the regular jobs. In the causal jobs, male with high school education are involved more in

causal jobs. In the self-employment, the secondary studied males are more. The female those are high school studied are more in self-employment. Income of the regular workers is higher as compare to causal and self-employed workers. The normal BMI percentage of the regular workers is higher as compare to the causal and self-employed workers. The causal and self-employed male workers in the moderate malnutrition category are more as compare to regular workers. We found that most of the informal sector workers are poor and malnourished. They are getting lower income within informal sector. It is conceivable that a shift in economic policy may help in making everybody better off but it is also possible that not all sections would benefit equally from such policy changes (Bahu, M.S. 2009). The betterment of informal sector workforce may not only possible by government policy but skills of the workers. In region, majority of the workers possess some traditional skills imbibed through household occupations or training by family members, neighbor and friends. The large proportion of the workers have little formal education or skill training (Rani, 2009).

Therefore government must provide the vocational training to unskilled workers in region. Such workers are involved in causal jobs. Enhancing the skills of a vast majority of labor force will necessitate the adoption of new approaches by the formal educational and vocational training institutions, in order to meet the skills needs of informal economy workers. Skill acquisitions in the auto components sector points towards the great absorption capacity of manual workers including even those with low levels of informal education, working in informal enterprises (Nathan, Dev and Anne Posthuma, 2009).The NGO's and state government must help women to start their own business. Commercial and co-operative banks must provide credit for self-employment. Microfinance institutions must focus on causal workers in suburbs. They must sanction more credit to such workers. It will help them to start small business. Government must provide drinking water supply in slums. It will reduce the work burden on women. Such time can be used for income generating activities. The organized retail sector is offered jobs to educated young and smart girls. However, few older women are found to be employed in this sector. Most of the girls employed are unmarried and are educated up to the twelve years (Goyal et al., 2009). There is need to provide long term employment opportunities with more number of benefits to women workers in organized retail sector.

The employment exchanges in the metropolitan region should pay adequate attention to employment opportunities that taking shape in the private sector. The focus should also be diverted to the fast growing service sector and opportunities need to be exploited in the sphere of employment generation in this sector by focusing attention on the proper collection, compilation, analysis and dissemination of labor market information (Chakraborty, 2010). In such a way, more informal sector workers may get absorbed in service sector. Health care units must provide the iron folic acid tablets to pregnant women in slums. They must provide knowledge of contraceptive to causal and self-employed workers. They must distribute the different methods of modern contraceptive in all slums. Such efforts will certainly help women to reduce child care burden. They can plan their pregnancies in advance with reliable contraceptive methods. Improvement in employment conditions in the unorganized sector in region would require special employment programs. But it certainly required government investment and support (Ghose A.K. 2010). All the above policies will certainly help to improve the present status of the informal sector workers in Mumbai Metropolitan Region.

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REFERENCES

Bahu, M. (2009). Losing out in a growing economy: labor in the organized mg sector in the era of globalization. *The Indian Journal of Labor Economics, 52* (2), 203-216.

Chakraborty, D. (2010). Performance of the employment exchanges in Assam: A comparative analysis. *The Indian Journal of Labor Economics, 53* (4), 671-676.

Chakrabarti, S. & Kundu, A. (2009). Formal-informal sectors conflict: A structuralist framework for India. *Journal of Economic Development, 34* (2), 27-67.

Ghose, A. (2010). India's employment challenges. *The Indian Journal of Labor Economics, 53*(4), 572-586.

Greene, W. (2003). *Econometric Analysis*. Fifth edition, Pearson Education Private Ltd, Indian Branch, Delhi, India.

Goyal, P., Goyal, M., & Saran S. (2009). Women workers in organized retail sector: A study of Ludhiana city in Punjab. *The Indian Journal of Labor Economics, 52*(2), 327-334.

Jose, S. (2008). Paid employment and female autonomy in India: Issues and evidence. *The Indian Journal of Labor Economics, 51*(3), 397-408.

Maiti, D., & Marjit S. (2009). Informal wage and formal sector productivity: Theory and evidences from India. Working Paper Series No. E/301/2009, Institute of Economic Growth University of Delhi Enclave, North Campus, Delhi – 110 007, India

Mohapatra, K. (2012). Women Workers in Informal Sector in India: Understanding the Occupational Vulnerability. *International Journal of Humanities and Social Science, 2*(21), 197-208, November 2012

Moreno-Monroy, A., Pieters J. & Erumban A. (2014). Formal sector subcontracting and informal sector employment in Indian manufacturing. *Journal of Labor and Development 2014, 3*(22), 1-17.

Mittal, N. (2012). Women workers in unorganized sector: Socio-economic perspective. *Asian Journal of Multidimensional Research, 1*(1), 3183-186, August 2012.

Nathan, D. & Posthuma A. (2009). Implication of global production for Indian firms and labor: An introduction. *The Indian Journal of Labor Economics*, *52*(2), 557-564.

Neeta, N. (2009). Contours of domestic service characteristics work relations and regulation. *The Indian Journal of Labor Economics, 52*(3), 489-506.

Raihan, S. (2010). Informal sector in Bangladesh: Implications for growth and poverty. *The Indian Journal of Labor Economics, 53*(2), 251-265.

Ramaswamy, R.V. (2009). Global market opportunities and local labor market: A study of the Indian textile and apparel industry. *The Indian Journal of Labor Economics, 52*(3), 607-630.

Rani, U. (2009). Learning workshops: Informal processes of learning and skill acquisition in auto components firms supplying to global production networks. *The Indian Journal of Labor Economics, 52*(4), 671-691.

Sharma, K. (2012). Role of women in informal sector in India. *Journal of Humanities and Social Science, 4*(1), 29-36.