

THE EFFECT OF EDUCATION ON INCOME AND NATURE OF EMPLOYMENT FOR THE INFORMAL SECTOR WORKERS IN MUMBAI METROPOLITAN REGION

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Abstract

The labours education and socio-economic status is an important determinant of income earning. Among daily wage earners, the lower level of education is observed. The income earned by the regular workers is higher as compare to daily wage earners and small business workers in Mumbai Metropolitan Region. The physical mobility and electronic asset holding is more with regular workers. We found more under nutrition incidence among daily wage earners as compare to regular workers. The nutritional knowledge is also lower among daily wage labours. Due to lower income earning, they are less likely to buy the nutritious food. The access to health care facilities is lower among daily wage earners in region. The regular contraceptive use is lower among daily wage earners. The multi-nominal logit regression shows the negative relationship of causal workers with age, education; purify water, chair, tables in house and age at marriage, female sterilisation and contraceptives from chemist. It is positively co-related to trips to water, beans vegetable and health camp visits of workers. Such results are compared with regular workers in region. The alternative policies are required to improve income earning among causal workers in region. Government must start skill training to workers to increase skills. They must be provided food grains through public distribution system. Health care facilities must be provided to the workers. The health care staff must visit to slums and provide health care, contraceptive, immunisation to small children. Banks must provide loans at lower rate of interest to self-employed poor people of region. Such policies will certainly improve the socio-economic status of the workers in Mumbai Metropolitan Region.

Keywords: Sanitation, water supply and health care.

1. INTRODUCTION

The informal sector plays an important role in an economy, especially in the developing countries. Since this sector encompasses many unorganized economic activities, including commerce, construction, manufacturing, transportation and services (Sasiwimon Warunsiri, 2011). Employment in the informal sector is no longer a journey but has become the destination of many. If the aim is to create jobs and reduce poverty, the informal sector must be included in the debate. Governments need to unequivocally recognize and admit the importance of the informal sector and finds ways to encourage its growth (Sparks, Donald L. and Stephen T. Barnett, 2010). In India, informal sector provides employment to substantial population. Maximum informal sector employment is observed in urban areas. In Mumbai Metropolitan Region, urbanisation is increasing fast. The skilled and unskilled labours are migrating from all over India. The unskilled labours find number of problems in Mumbai

Metropolitan Region. Housing in inadequately developed in region and it is more expensive. The different have also found that informal sector has high proportion of migrant labours from rural disadvantaged social and ethnic groups (Misra, Pushpendra and Mohd.Saif Alam, 2014).The newly migrants primarily trace work in the informal sector in region. They do not possess adequate skills that are required to get jobs in organized sector.

This is the main cause behind existence of dual nature of labour market in the region. On one hand, there are the scantily paid workers, not availing any form of social security in the informal sector and in contrast there are the highly skilled and better paid formal sector workers in region. But still the migrant labours earn more income in the region than in the rural areas. But they are still underpaid in the informal sector in the region. Such lower payment is affecting on their standard of living and quality of life. In metropolitan region, such migrant's labours with lower education, skills and socio-economic background live in slums. Such poor workers are working on casual, regular and small business. They do not get high and regular income from such activities. In general, the informal sector in region is disadvantaged sector and employing unskilled, less educated and migrants. Therefore in different studies, the informal sector has been referred to as street vendors, domestic workers or unregistered small-scale activities (Tchakounté Njoda Mathurin, Ulrich Gaetan, 2016).High poverty is observed in slums of region. Due to unemployment, poor people perform variety of economic activities. It is the main reason of mushrooming of the informal economy such as vending, operating tuck-shops and various micro enterprises (Nkululeko Ndiweni et.al. 2014). Informal employment comprise as casual, self and wage employment that are usually not recognized, regulated, or protected by legal or regulatory frameworks. We have defined an informal sector in three categories such as regular, self employed and casual workers in region. The regular workers perform variety of work but only get fixed salary at the end of month. The wage offered is very low at such jobs. The casual workers work at different sites and the work sites are changing continuously. They required working long hours at different long distance sites. They get very low and irregular salaries and during rainy seasons, work is not available at all. The self-employment, including own-account workers, heads of family businesses, and unpaid family workers. Income in self employment is depending on nature and capital invested in business.

The informal sector is continuously expanding in region. It has been serving as a 'safety belt' in providing employment and income to the teaming poor. Most of the time, informal sector activities, often described as unrecognized, unrecorded, unprotected, and unregulated by the public sector are no longer confined to marginal activities but also included profitable enterprises in manufacturing activities. The informal sector is largely characterized by low entry requirements, small-scale operations, skills acquired outside of formal education and labour-intensive methods of production. The informal sector is also defined in terms of activity, employment category, location of actors, and income and employment enhancing potential (Onwe, Onyemaechi Joseph 2013). The self employed women workers are involved in variety of economic activities in region. It is difficult to classify such micro and multiple level activities of women workers. We have categorised the women workers activities based on major economic activities. The low income in economic activities is affecting on the purchase

of nutritious food. Therefore most of the women workers are also supplementing income through involve in various economic activities in informal sector. But they get lower wages and income in such sector. The reason for this gender discrimination is ingrained in political, legal, economic and cultural factors that adversely affect the status of women, limit the employment opportunities and employment options for women (Sarwar Farhan and Abdus Sattar Abbasi, 2013). Workers required physical strength for different kinds of work. But lower income does not support to buy good and healthy nutritious food. It effects on the health status of workers. The malnourished workers do not earn more income and they fall in the vicious cycle of health-poverty- nutrition. Lower health status does not permit to work on daily wages and perform at business or work on regular jobs. Workers working in various jobs do not gets sufficient income. Therefore they do not buy physical assets such as chair, tables in house. They live in kutcha slums which affects on purchase of physical assets. The kutcha slums in region can be demolished at any time by municipal authority. Therefore it is affecting on physical asset holding in houses. The electronic assets such as radio, television, washing machine is not purchased by workers. Television and radio is an important asset to listen news and mother-child health related programs. The mobility related assets such as bike, car, and bicycle are important to access various community resources such as health care facilities and market. But workers are too poor therefore they cannot afford to buy mobility assets. It affects on the standard of living of workers. Most of the workers are too poor and do not have money to buy newspaper and magazines. The reading of newspaper, magazines are not possible because money and time scarcity. Therefore it is affecting on their knowledge. The workers involved in daily wage, business, self employment have high opportunity cost of health care. They are already earning very low income. If they want to visit to health care facilities then there is high direct and indirect cost. The direct cost includes travel cost, doctor's fees, medicines, daily income loss. The indirect cost includes waiting time in queue, travel time. Therefore for medical treatment the repeated visits cannot be possible. In order to reduce medical expenditure workers do self-medication. Health care through private sector is not possible because it is expensive and workers cannot afford such health care. They remain without health care and it is affecting on their productivity and daily earnings.

Few workers visit public health care facilities and medical camps. They are located far away from slums. It requires to wakes up early and travel long distance by bus and train. They need to travel early in the morning and stand in long queue to meet doctor. The health staffs do not listen to poor people. They cannot contact doctor and nurse on urgent basis. They need to follow long queue at different hospitals while checking patients. The doctors in various hospitals do not give them adequate time. While physical checking, the privacy of the women patient is not maintained. The health workers do not talk nicely and treat adequately to patients. Such activities and treatment discourage workers from visiting the public health care facilities in region. They are asked repeated visits but repeated visits are not possible due to nature of job, time and income scarcity. The workers leave health treatment at mid level itself. It is adversely effect on health status of workers. Workers do not use the

modern contraceptive methods. They do not have access, knowledge, experience of modern contraceptive methods. The uses of modern contraceptives such as condom, pills, IUD use require guidance from health care staff. Workers in region do not have time to go health facilities and consult with doctors about contraceptives. They use traditional methods of contraceptives because they are easy and not expensive methods. After completion of desired fertility, women perform family planning operation. The men workers do not do the vasectomy. Health workers do not visit slums in region. They do not provide health care, knowledge of contraceptives and contraceptives at the door step of households in slums. The density of population is higher in slums and the health care staffs are less in number. Therefore provision of consistent and adequate health care is not possible. The quality health care for workers is another issue in slums of region.

2. DATA AND METHODOLOGY

For this study, we have surveyed 3004 households from kutchra slums in Mumbai Metropolitan Region. Total eighteen slum settlements were chosen for this study, from which five slum settlements are belonging to the central suburbs while the rest came from the eastern suburbs. Within each slum settlement and house, a questionnaire was administered. This study is conducted during January to February 2016. We analysed primary data in SPSS @20 and STATA @10software. We used multi nominal logit model to examine the socio-economic and demographic co-relation with different types of workers in region.

Economic model

We have developed economic model for the different type informal sector workers in Mumbai Metropolitan Region

$$\sum_{t=1}^i P_{MMR} = (C, W, O) \quad (1)$$

Total population i at time t in MMR consists of children, working population and older persons. This model is for economically active workforce. Therefore children and older persons are not considered.

$$\sum_{t=1}^i W = W_{fs} + W_{is} \quad (2)$$

Work force i in region at time t comprises as workforce in formal and informal sector.

$$\sum_{t=1}^i W_{if} = R + C_w + S_e \quad (3)$$

The informal sector workforce i at time t in informal sector is categorised as regular, casual and self employed workers of region.

$$E = (I, P, S, HS, C) \quad (4)$$

An education of the informal sector workers is categorised as illiterate, primary, secondary, high school and college studied.

$$Y = (R, C_w, S_e) \quad (5)$$

Income of the regular, casual and self employed workers is categorised into different groups.

$$P_a = (C, S_m, C_h) \quad (6)$$

The physical assets in workers house comprises as chair, table, sewing machine and cooker.

$$E_a = (W, F, R, T_r) \quad (7)$$

An electronic asset in any house comprises as watch, fan, radio, telephone, fan, refrigerator,

$$M_a = (B_{ic}, B, C) \quad (8)$$

Mobility assets comprises as bike, bicycle, and car in house.

$$H_{sw} = (S, M_i, M_o, N, O_b, O_{b2}, O_{b3}) \quad (9)$$

Health status of workers comprises as mild, moderate, severe, normal, obese one, obese two, obese three. First three categories show under nutrition where as last three categories explains obesity.

$$N_k = (R_n, R_w, W_t, W_c, K_{nm}) \quad (10)$$

The nutritional knowledge of workers comprises as reading newspapers, magazines and watches television, watch cinema once in a week and know about nutrition.

$$V_f = (M, C, P, B, Ov, F) \quad (11)$$

The vegetarian food eaten by the workers comprises as the milk, curd, pulses, beans, other vegetables and fruits.

$$NV_{fc} = (E, C, M, F) \quad (12)$$

The non vegetarian food of workers comprises as eggs, chicken, meat and fish.

$$H_c = f (N_t, N_b, R_{hs}, P_{hc}) \quad (13)$$

The public health care facilities are subjected to deliver proper health care but they do not talk and behave nicely with workers. Workers do not receive health care and pay high amount for health care.

$$T_{hc} = (W_t, A_u, G_t, P_m, H_y, C_o) \quad (14)$$

The health treatment in public health care facility mainly comprises as well treatment, paid attention, time given, privacy and hygiene maintained and contact with the health staff.

$$C_{mw} = (P, C, I_{UD}, S, V, K_n, O) \quad (15)$$

Contraceptives methods used by the workers consist of the pills, condom, IUD, sterilisation, vasectomy, not known method and others.

$$C_R = (D_i, H, C_{hc}) \quad (16)$$

The condom received by male workers from different sources consists of health clinics, hospitals and chemists.

Definition of informal sector work force

We have defined the informal sector labour work force in the Mumbai Metropolitan Region as follows. Self-employed or business persons who engaged in non-farm enterprises or were engaged independently in a profession or trade on own-account or with one or a few partners were treated as self-employed in household enterprises. The essential feature of the self-employed is that they have autonomy to decide how, where and when to produce and economic independence in respect of choice of market, scale of operation and finance for carrying out their operation. The remuneration of the self-employed consists of a non-separable combination of two parts: a reward for their labor and profit of their enterprise. The combined remuneration is wholly determined by the revenue from sales after netting out value of purchased inputs used in production categories of self-employed persons. Self-employed persons were categorized as own-account workers, those self-employed persons who operated their enterprises on their own account or with one or a few partners and who, during the reference period, by and large, ran their enterprise without hiring any labor. They could, however, have had unpaid helpers to assist them in the activity of the enterprise. The regular wage earners are those persons who worked in non-farm enterprises and, in return, received salary or wages on a regular basis. This category included not only persons getting time wage but also persons receiving piece wage or salary and paid apprentices, both full time and part-time. Casual or daily wage labourer are those engaged in non-farm

enterprises and, in return, received wages according to the terms of the daily or periodic work contract, was a casual wage labourer (Sharma, Khema 2012). Such classifications are used in our study and studied the socio-economic characteristic of the workers.

Workers education and income in Mumbai Metropolitan Region

Workers education plays an important role in income earning. Highly educated workers always learn skills and earn high income. They also join the regular work or do the business. From the following table, we can observe the workers education and their work profile.

TABLE 1 - THE WORKERS EDUCATION AND NATURE OF WORK (PER CENT)

Education	Daily		Business		Regular	
	M	F	M	F	M	F
Illiterate	66.10	74.57	58.13	57.50	54.19	68.75
Primary	23.67	19.08	30.76	25.00	31.61	25.00
Secondary	8.03	6.36	9.08	17.50	6.77	6.25
High secondary	1.61	0.00	1.22	0.00	4.84	0.00
College	0.59	0.00	0.81	0.00	2.58	0.00

Source: Computed from primary data

The workers are engaged in number of self-employed activities in region such as artisans, shoemakers, tailors, manufacturers of beers and spirits. They also work in housing, transport, utilities, commodity speculation. We also found that few workers are engaged in small-scale distribution such as market operatives, petty traders, street hawkers, caterers in food and drink, bar attendants, commission agents, and dealers. Some self employed workers are working as musicians, launderers, shoe shiners, barbers, night-soil removers, photographers, vehicle repair and other maintenance workers; brokerage and middle man-ship, ritual services, magic and medicine suppliers. The workers involved as selling flour mill, vegetables, charcoal, cooked food, banana, milk in the markets, hair dressers. Such economic activities are providing very low income. But they are engaged in variety of economic activities. There are 66.10 percent male and 74.57 percent female are illiterate and they are daily wage earners. Among regular jobs, the 54.19 percent male and 68.75 percent female are found. The 9.08 percent male and 17.50 percent female are primary studied and they are doing business. The 31.61 percent male and 25 percent female have regular jobs and they are studied secondary school. The high secondary studied male are 4.84 percent and they are in regular job. Similarly 2.58 percent are working in regular jobs but they are college studied. As education of the workers improves, they move towards the regular jobs. Education is widely believed to be one key factor that affects women’s involvement in the labour market. We found that the women who obtained post-elementary education were more likely to join the home-based artisan works because they wanted to develop their skills in artisan production. Education is the way for women to redeem self-esteem, equalize social status and generate sustainable income. In assessing the goal of educating women which is to prepare them for employment and compete with men in other economic sectors. Women were not equipped with

enough skills to attain and secure well-paid jobs; as a result, they ended up coming back to the subsistence activities of the informal sector (Nguyen, Linh T. 2015). Women in the informal sector are well-known for their small scale production and service activities. Most of them inhabit slum and squatter settlements with poor conditions of houses, electricity, water, drainage, transportation, and educational and health services. Most of the time, it is also found that women have fewer educational opportunities than men which forces them to join informal sector activities. The informal sector is differentiated by a large number of small scale production and service activities that are individually or group owned. Women in the informal sectors are self employed workers with little formal education, are generally unskilled, and lack access to financial capital. Because of this worker productivity and income tend to be smaller in the informal sector than in the formal sector. Among the factors that drive women to migrate are the need to engage in the formal employment coupled with the search for better life in the formal sectors. However, most of them find themselves jobless and they join the informal sector to secure employment. Many women inhabit slum and squatter settlements with poor conditions of houses, electricity, water, drainage, transportation, and educational and health services. Although there is ever increasing failure of the rural and urban formal sector to absorb new entrants to the labour force, more attention is being given to the formal sector only. Attentions are being given more to the formal sector though the informal sectors are the only hope for a large number of women who are not able to find employment in the formal sector (Deribie Ebisa, 2012). Workers also earn higher income in different jobs but it also depends on their experience and skills. The daily wage workers do not have high income earning capacity. The regular workers get the salary which is fixed by the company or the firm. It is also depends on their experience and capacity of work. The income is insufficient to buy food and other items (Rthenberg, Alexander et.al. 2016). We have classified the monthly income of workers as compare occupation in region.

TABLE 2 - MONTHLY HOUSEHOLD'S INCOME OF WORKERS IN MMR (PER CENT)

Income (Rs.)	Daily		Business		Regular	
	M	F	M	F	M	F
0	0.75	1.72	0.27	0.00	0.97	3.13
0-5000	20.10	32.18	15.41	32.50	20.97	31.25
5000-10000	50.88	42.53	54.59	50.00	51.94	59.38
10000-15000	22.23	18.97	21.49	7.50	18.06	3.13
15000-20000	4.97	1.72	6.35	7.50	6.13	3.13
20000-25000	0.80	1.72	1.22	2.50	1.94	0.00
25000<	0.27	1.15	0.68	0.00	0.00	0.00

Nearly 20.10 percent male and 32.18 percent female are earning Rs.0-5000 income in daily wage. Such income is very low for joint family in region. There are 20.97 percent male and 31.25 percent female are working on regular job but they are earning between Rs 0-5000 income. Around 51.94 percent male and 59.38 percent female are in regular job and they are earning between Rs.5 to 20 thousand monthly. The 22.23 percent male

and 18.97 percent female are earning between Rs.10000 to Rs.15000 per month. In business 6.35 percent male and 7.50 percent female are earning between Rs.15000 to Rs.20000 per month. In daily wage, 0.27 percent male and 1.15 percent female are earning above Rs.25000 per month. Such high income is earned by few workers in this sector.

Asset holding among informal sector workers

Physical asset holding helps workers to relax at home. High standard of living of workers show higher asset holding in house. The electronic assets such as watch, sewing machine help workers in day today functioning. Mobility related asset helps workers to use community related assets. They easily access community assets such as market, health care welfare institutions etc. The television, radio helps to listen family planning programs, speeches of experts. Workers easily improve knowledge through mass media.

TABLE 3 - ASSETS IN HOUSES OF WORKERS IN MMR (PER CENT)

Assets	Daily		Business		Regular	
	M	F	M	F	M	F
Cooker	41.42	27.50	48.38	59.38	67.74	40.24
chair/bed	14.16	6.90	17.30	5.00	27.42	15.63
Watch	11.06	9.20	14.32	10.00	21.29	9.38
Electricity	94.81	95.57	97.84	94.50	90.65	96.63
Fan	73.01	67.24	81.49	75.00	88.71	71.88
Bicycle	1.92	1.72	1.22	0.00	4.84	6.25
Sewing machine	0.37	1.15	0.14	0.00	1.61	3.13
Radio	0.64	0.00	0.54	0.00	0.65	0.00
Telephone	13.31	23.56	11.76	12.50	17.10	15.63
Refrigerator	0.75	1.15	0.41	0.00	1.61	01.00
Television	13.63	32.18	17.70	17.50	30.65	40.63
Bike	0.75	0.57	0.14	0.00	1.94	0.00
Car	0.00	0.00	0.11	0.57	0.00	0.00

Nearly 67.74 percent male and 40.24 percent female said that they have cooker in house and they are working in regular job. Only 14.16 percent male and 6.90 percent female daily wage earners said they have chair and table at home. Around 21.29 percent male and 9.38 percent female have water connection in house and they are in regular job. Only half of daily wage earning workers have electricity in house. They are poor and they have kutcha houses. Therefore electricity meter connection is not possible. Nearly 88.37 percent male and 71.88 percent female have fan in house and they are in regular job. Nearly 4.84 percent male and 6.25 percent female are in regular job and they have bicycle in house. Only 1.61 percent male and 3.13 percent female have swing machine in house and they are in regular job. Radio is an important source of information and news but only 0.65 percent regular male workers have radio in house. Nearly 17.10 percent male and 15.63 percent female have

telephone in house and they have regular job. Television in house is used to watch news and movies. Total 1.61 percent male and 1 percent female have regular job and they have refrigerator in house. Nearly 30.65 percent male and 40.63 percent female have television in house and they have regular job. Total 1.94 percent male workers said that they have bike in house and they are regular workers. The bike is used to access community resources. Around 0.11 percent male and 0.57 percent female have car in house and they have small business.

Health status of the workers in region

The daily workers need physical strength for regular work. Such physical strength can be used to earn more income. But low health status does not help workers to earn more income. They fall sick again and again. Normal BMI is an important aspect for workers in daily wage earning, regular workers and business.

TABLE 4 - BMI CLASSIFICATION AND HEALTH STATUS OF WORKERS (PER CENT)

BMI	Daily		Business		Regular	
	M	F	M	F	M	F
<16	2.35	2.87	2.84	15.00	1.94	3.13
16-16.99	1.87	1.15	1.08	0.00	1.61	3.13
17-18.49	6.73	6.32	4.73	7.50	6.45	3.13
18.5-25	42.86	36.78	43.78	17.50	39.35	31.25
25.1-29.99	11.65	15.52	17.03	17.50	9.35	6.25
30.-39.99	5.02	12.64	4.73	22.50	5.16	15.63
>40	0.37	3.45	0.68	10.00	0.65	0.00

The 2.84 percent male and 15 percent female have severe BMI (below 16 BMI) but they are involved in business. Nearly 1.61 percent male and 3.13 percent female have moderate BMI between 16-16.99 and they are regular workers. Total 6.73 percent male and 6.32 percent female have (17-18.49) mild BMI. Total 42.86 percent male and 36.78 percent female have normal BMI. But they are daily wage earners. Around 17.03 percent male and 17.50 percent female are in obese one category and they have small business.

The 4.73 percent male and 22.50 percent female are obese-II and they are doing small business. The 0.68 percent male and 10 percent female are obese III and they are doing small business in region.

Nutritional Knowledge of workers

Reading magazines and newspaper helps to earn knowledge and current information and knowledge. Nutritional knowledge also helps to improve health status of workers. Milk has protein, vitamins and calories. Pulses help for protein and calories. The regular consumption of vegetables helps to get calories and protein.

Fruits are useful source of nutrition and vitamins. Non vegetarian food contains protein, calories. It helps to work efficiently for more time. For manual work, more protein and calories are required. It improves productivity of workers.

TABLE 5 - THE WORKERS AND ACCESS OF KNOWLEDGE AND NUTRITION EATEN (PER CENT)

Access of knowledge and nutrition eaten	Daily		Business		Regular	
	M	F	M	F	M	F
Read newspaper, magazine	10.48	10.91	7.16	10.12	16.12	9.37
Watch television	56.28	48.27	66.08	57.52	74.51	53.12
Watch cinema once in a week	17.15	27.58	14.59	20.18	23.87	34.37
Know nutrition	8.39	14.36	4.86	10.14	9.35	3.12
Milk	66.75	72.98	63.37	60.25	90.32	87.52
Curd	50.82	41.95	54.72	42.53	68.06	56.25
Pulses	87.22	70.11	94.32	85.63	83.22	65.62
Beans	48.85	42.52	54.32	40.34	62.9	41.86
Other vegetables	97.86	96.55	98.37	100	95.48	90.62
Fruits	56.17	54.02	57.83	50.54	78.06	68.75
Eggs	58.63	64.94	58.37	52.58	79.67	68.75
Chicken	60.34	68.96	58.91	55.53	84.19	90.62
Meat	57.13	60.91	57.73	50.45	77.41	68.75
Fish	60.34	66.09	58.51	55.45	83.54	90.62

Total 16.12 percent male and 9.37 percent female read newspaper and magazine and they have regular job. Nearly 74.51 percent male and 53.12 percent female watch television and they are in regular job. Around 23.87 percent male and 34.37 percent female are in regular job. Only 8.39 percent female and 14.36 percent female known nutrition but they are daily wage earners. Around 90.32 percent male and 87.5 percent female drink milk regularly and they are in regular work. Nearly 68.06 percent male and 56.25 percent female eat curd in diet and they regularly eat curd in diet. Among business employment 94.32 percent male and 85 percent female are eating pulses but they have small business. Around 62.9 percent male and 41.86 percent female eat beans in diet and they have regular job. All female and male told that they have business and they eat all other vegetables. Around 78.06 percent male and 68.75 percent female eat fruits and they are in regular job. Eating fruits is important to get all vitamins. We found that 79.67 percent male and 68.75 percent female eat eggs in diet and they are in regular job. Eggs have rich source of protein. Around 84.19 percent male and 90.62 percent female eat chicken and they are in regular job. The workers in regular jobs can afford chicken once in a week. Similarly 77.41 percent female and 68.75 percent male eat meat but they are in regular job. Similarly 83.54 percent male and 90.62 percent female eat fish but the workers are in regular job.

Health care facilities to workers in region

All workers visit health care facilities in region for different illness. The piped water is not provided to slums in region. Therefore water washed and water borne diseases are high. The workers need continuous health

treatment. But when they visit health care facility, they are not treated properly. Health workers do not speak properly and treat patients. They ask money for treatment and do not behave properly. Workers do not have time due to work pressure. Therefore uses of the health care facilities are low among different kind of workers.

TABLE 6 - NATURE OF HEALTH CARE IN PUBLIC HEALTH CARE FACILITIES (PER CENT)

Nature of health care in public health care facilities	Daily		Business		Regular	
	M	F	M	F	M	F
Nicely talked	22.24	22.29	21.62	23.19	32.58	29.37
Received health service	26.19	32.06	32.82	24.25	36.77	24.50
Paid for health care	31.49	21.14	22.07	23.13	24.64	17.91
Behave nicely	25.39	32.06	22.16	23.14	26.77	39.37

The 2.58 percent male and 9.37 percent female said that health workers talk nicely with them but they are regular workers. Only 2.82 percent male and 5 percent female said that they have received health services from public health care facilities. Around 1.49 percent male and 1.14 percent female said that they have paid to health care facility. Around 6.77 percent male and 9.37 percent female said that the staff of health care facility behaved properly and nicely with them. But they are involved in the regular work.

Use of health care facilities by workers in region

Workers visit public health care facilities. But health workers do not treat them properly attention is not paid on their health. Time is not given and detail questions are not asked about their health. While providing treatment privacy of women workers is not maintained. The questions related to modern contraceptives are asked to workers. The hygiene is not maintained properly in health facilities. Workers do not get facilities like toilets, bed and drinking water at health care facilities. If the facilities are available then they are not maintained properly. Hygiene conditions are not maintained in public hospitals. Few workers regularly contact health workers. Their contracts do not help them to get regular treatment from public hospitals.

TABLE 7 - USE OF HEALTH CARE FACILITIES BY WORKERS (PER CENT)

Use of health care facility	Daily		Business		Regular	
	M	F	M	F	M	F
Well treated	28.97	12.64	25.40	20.14	24.51	29.37
Paid Attention	28.55	11.49	25.67	18.45	22.25	23.12
Adequate time given	29.08	12.06	35.67	35.11	24.51	29.57
Privacy maintained	19.13	12.06	15.67	15.11	14.51	19.37
Good hygienic conditions	18.6	19.19	15.54	16.41	13.54	19.37
Contacts	16.46	13.44	12.13	13.15	11.65	13.12

The 14.51 percent male and 9.37 percent female said that they have been well treated in health care facilities. They are regular workers. Around 8.55 percent male and 11.49 percent female said that they paid attention while

giving treatment. Nearly 14.51 percent male and 9.57 percent female said that the health staffs has paid attention to their health problem and gave time to their health problem.

The 9.93 percent male and 12.06 percent female said that their privacy is maintained during their health check-ups by public health care facility. Only 5.54 percent male and 5 percent female said that hygienic condition is maintained at public health care facility and these are the business workers. The 64.6 percent male and 3.44 percent female have contact with health staff. These are the daily wage earners.

Contraceptive use by workers in region

Access to condom is very low among workers. It is an expensive source of contraceptive for poor people of slums in region. The chance of condom failure is high. Therefore they do not buy from clinics, hospitals and chemist. Such use of modern contraceptives also requires the minimum level of education. But they do not have more education. Workers with lower education do not have knowledge of contraceptives.

The modern contraceptives require the health, knowledge, availability of method and experience. But workers do not have access to modern contraceptive method. The use of IUD, Condom and pill is very low among the casual workers. They do not have time to visit health care facilities and get knowledge and contraceptive method.

TABLE 8 - CONTRACEPTIVE METHODS USED BY WORKERS (PER CENT)

Contraceptive methods used	Daily		Business		Regular	
	M	F	M	F	M	F
Pills	12.88	16.66	10.81	30.13	14.19	13.12
Condom	22.51	23.44	24.32	25.11	25.16	23.12
IDU	10.48	9.57	10.81	02.5	0.96	1.000
Sterilisation	23.19	34.48	13.78	20.33	25.8	37.5
Vasectomy	0.21	0.57	0.27	02.5	0.64	0.00
Not known	13.47	16.89	11.08	10.21	17.41	19.37
Others	4.59	6.89	2.83	2.5	8.06	03.80

Nearly 10.81 percent male and 30 percent female said that they use pills as family planning method. The 5.16 percent male and 3.12 percent female have used the condom as family planning method. Among business category, 2.5 percent women said that they are using IUD as a family planning method. Among the regular workers category, the 25.8 percent male and 37.5 percent female said that they have used the sterilisation as a family planning method.

The 0.27 percent male and 2.5 percent females said that their husband have used vasectomy as a family planning method. Around 7.41 percent female and 9.37 percent female said that they do not know which method they are using as family planning. Total 14.59 percent male and 16.89 percent female are using traditional method of contraceptives.

TABLE 9 - CONDOM RECEIVED FROM DIFFERENT SOURCES (PER CENT)

Condom received	Daily		Business		Regular	
	M	F	M	F	M	F
Clinics	12.03	11.72	10.81	12.52	15.48	16.25
Hospitals	11.81	12.29	10.81	12.89	14.19	13.01
Chemists	15.61	19.19	12.56	10.10	12.25	18.53

Among regular workers total 5.48 percent male and 6.25 percent female said that they always bring condom from clinics. Total 4.19 percent male and 3.01 percent female said that they bring the condom from hospital and they are regular workers. But 12.25 percent male and 8.53 percent female bring condom from chemist but they are regular workers.

The multi-nominal logit regression results

We have used multinomial logit regression (Greene W. 2005) to understand the difference of work of different type of workers. The model is defined as follows.

TABLE 9 - REGRESSION RESULTS FOR THE WORKERS

Variables	Co-efficient	Standard error	Wald Test	Variables	Co-efficient	Standard error	Wald Test
Age	-0.01***	0.00	2.62	Age	-0.00**	0.00	3.86
Education	-0.05**	0.01	9.80	Wages	0.00***	0.00	2.76
Trips for water	0.03**	0.01	5.30	Trips for water	0.03**	0.01	4.31
Purify drinking water	-1.52**	0.44	12.07	Trips by women	-0.08**	0.04	4.35
Kitchen in house	-0.89**	0.43	4.31	Trips by others members	0.16***	0.08	3.72
Cooking	0.16**	0.07	4.20	Purify drinking water	0.89***	0.54	2.71
Chair/table	-0.45**	0.19	5.16	Chair/table	-0.40***	0.22	3.16
Swing machine	-1.65**	0.74	4.93	Electricity	0.88***	0.46	3.66
Age at marriage	-0.06**	0.01	10.24	Fan	0.59***	0.34	2.56
Read magazine	0.55**	0.26	4.51	Age at marriage	-0.07**	0.02	11.28
Know nutrition	-0.93**	0.41	4.99	Read magazine	-0.47**	0.25	3.47
Beans	0.48**	0.24	3.98	Beans	0.58***	0.32	3.32
Chicken	-0.70**	0.40	3.09	Milk consumption	-1.20**	0.45	7.08
Meat	0.58***	0.31	3.58	Have sons	0.42**	0.16	6.94
Have sons	0.28**	0.15	3.26	Alive sons	-0.41**	0.17	5.85
Alive sons	-0.38**	0.16	5.64	Husband permit to visit market	-39.28*	0.42	6928.31
Husband's behaviour	-1.87***	0.99	3.52	Husband beat	0.48***	0.25	3.75
Camp visit	2.29**	0.95	5.74	Last visit to hospital	0.75***	0.45	2.77
Female sterilisation	-0.46**	0.20	5.05	Camp visit	2.07**	1.03	4.04
Contraceptive from chemist	-0.59**	0.28	4.27	Condom used	1.06**	0.40	6.99
				Female sterilization	-0.83*	0.23	12.53
				Not known method	-1.12**	0.46	5.93
				Contraceptive from chemist	-1.02**	0.38	7.00
Log likelihood=4837.03, Chi square=6.56, Cox and Snell=0.18,							
Nagelkerke=0.22, Mc Fadden=0.119							

*Significant at 1 percent, ** significant at 5 percent, *** significant at 10 percent

$$Pr (y_i = j) = \frac{Exp (X_i B_j)}{1 + \sum_j^J exp (X_i B_j)} \quad (17)$$

and

$$Pr (y_i = 0) = \frac{1}{1 + \sum_j^J exp (X_i B_j)} \quad (18)$$

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. The results are presented in Table 9.

Age of the daily wage earners is negatively co-related with regular workers. At lower age, most of the workers are working in informal sector. Poverty does not allow them to avoid work and remain absent from labour market. The education of the daily wage earners is low. It effects on the wage earning. Lower education does not support to get regular work. The trips by the daily wage earners are positively co-related as compare to the workers of regular job. Water is located far away from slums. They have no choice but to carry it from longer place. The workers of the daily wage earners category do not purify drinking water. They do not have any system of water purification in home. They drink water which is bought from different sources. The kitchen is not found among the houses of the daily wage earners. They are negatively co-related as compare to the regular workers. Houses are small. Workers live and cook food at one corner of house. Therefore separate kitchen is not found. But among houses of regular worker kitchen is found. They get higher income therefore they have separate kitchen in house. The daily wage earning workers do not have the big houses. The chair and table are not found in houses. But workers of regular job have high income therefore they buy chairs/tables. Therefore chairs/tables are negatively co-related to daily wage labourers. Among the houses of daily wage earners swing machine is not found. They are too poor and engaged in daily labour activities. Therefore swing machine is negatively co-related with daily wage earning. The age at marriage is negatively co-related to daily wage earners. Daily wage earning male and female marry at early age. The parents are poor. They force their daughters and sons to marry at early age. Therefore it is negatively co-related as compare to workers with regular job. Daily wage earners watch television. After returning from work, they watch television for some time. The regular workers also watch television at home. It is watched at evening time. Therefore it is positively co-related and statistically significant. Daily wage earners do not have knowledge about all nutrition. They have not read many books related to nutrition. We asked number of questions related to nutrition to workers. But the workers do not know about nutrition. They eat food which is available at lower price. The workers with regular job have knowledge of nutrition. They get knowledge through books and mass media. The daily wage earners regularly eat beans in diet. It is positively co-related and statistically significant. Beans are cheapest source of nutrition. They buy from

market and eat in diet. But regular job workers do not eat beans in diet. Daily wage earners do not eat chicken and it is negatively co-related as compare to regular workers. Chicken is expensive source of protein therefore it is negatively co-related with daily wage earning workers. The daily wage earners eat meat. It is positively co-related and statistically significant with compare to regular wage earners. The workers with regular job do not eat meat in diet. This might be cheaper source of nutrition. Total sons are positively co-related and statistically significant with daily wage earners. But it is not true with workers involved in the regular job. The husband's behaviour is negatively co-related with daily wage earning female. Husbands do not provide money regularly to spend. They always have quarrels related to money. Therefore it is negatively correlated and statistically significant with compare to regular workers. The daily workers visit health care camps. Doctors treat patients on regular camps. It is cheaper and they are close to their places. They do not have time to visit hospitals for health care. Female sterilisation is negatively co-related and statistically significant as compare to regular female workers. Female workers complete total fertility but they do not have time to visit health care facility and perform female sterilisation. The daily wage earners are poor they use number of traditional contraceptives methods. They do not have money to visit to chemist and buy the contraceptives. They complete fertility and perform family planning operations. Therefore the contraceptives from chemist are negatively co-related and statistically significant.

The age of the self-employed workers is low as compare to the regular wage earners. At lower age they start self-employment activity. Therefore it is statistically significant and negatively co-related. The incomes of the self-employed workers are low as compare to the regular workers. Self-employed workers are involved in the small scale business activities. Money is not received regularly and higher in these activities. They do not have capital to invest in business. Therefore the incomes are low in self-employment as compare to workers with regular job. Trips by workers are positively co-related with self-employed workers. Water is located far away. They need to carry water from long distance. Therefore they need to visit many times to water tap. Therefore trips for water are positively co-related. The water trips are positively co-related to the other members of family. In poor families, the male, small children, in laws carry drinking water. They carry it from long distance. Women work at home. Therefore water trips are positively co-related and statistically significant with trips for water by others. Trips by women are negatively co-related and statistically significant. It is mainly because women are involved in different activity such as cooking, care of children and older people, cleaning house. Therefore carrying water is negatively co-related and statistically significant with self-employed women. The self-employed workers do not purify water. They do not have purification system. They often drink water which is bought from tap. They are poor as compare to regular workers. Therefore water purification is negatively co-related and statistically significant with self-employed workers. The self-employed male and female are very poor. They do not have money to buy chairs and tables in house. Therefore it is negatively co-related and statistically significant. Such results are compared to the workers with regular job. The self-employed workers have electricity in house. It is

statistically significant and positively co-related as compare to the workers with regular jobs. The fan in house is positively co-related to the workers of self-employment category as compare to the regular job workers. We found negative relationship of age at marriage with self-employed male and female. They got marry early and start employment activities. It is not found with regular job workers. The self-employed workers do not read magazines. The poor people do not have reading material. They do not have access to it. Therefore reading magazines is negatively co-related and statistically significant with self-employed workers as compare to the regular job workers. The self-employed workers eat more beans in diet. Consumption of beans is cheaper. Therefore they are positively correlated and statistically significant. The milk consumption is negatively co-related with self-employed workers. Milk is expensive source of calories and protein for poor workers. Self employed male and female cannot buy milk and drink milk every day. But regular workers can buy and eat milk in diet. Total sons are positively co-related and statistically significant with self employed earners. But it is not true with workers involved in the regular job. The self-employed female workers do not get permission to go to market for shopping. They are poor and do not have money. Therefore women do not get permission to go to market as compare to women of the regular jobs. The husband of the self-employed women often beat them. It could be the reason of money, permission of different things or children and in-laws related issues. But the husbands do not beat to women of regular jobs. Therefore husband beating is positively co-related and statistically significant with the self-employed women. The camp visit is positively co-related and statistically significant. The workers are poor and they do not visit to hospitals. But workers with regular job do not visit to the health camps. They do not have money and time. But self-employed workers visit health camps. The self-employed workers use condoms as a family planning method. Self-employed workers have time and money. Therefore it is positively co-related and statistically significant. The women of self employed category have not performed the female sterilization. The women workers with regular job perform sterilisation. The women workers with regular jobs perform sterilisation. The regular workers have more time and they can take rest after sterilisation. But the self-employed women workers do not have time to take rest. Therefore they do not perform sterilisation and always postpone it. The self-employed workers do not know different methods of family planning.

They are negatively co-related and statistically significant. The self-employed workers do not bring the contraceptives from the other sources. Therefore condom from chemist is statistically significant and negatively co-related with self-employed workers. But for regular workers, it could be positively correlated and statistically significant.

3. POLICY IMPLICATION AND CONCLUSIONS

The informal sector has attracted much attention from both policy makers and researchers from developing countries. This is because of the crucial roles of the sector in these economies. The sector plays a major role in the development process of developing economies (Folawewo, Abiodun 2006). The expansion of self-

employment, casual labour and outsourcing in the construction sector around the world and the growing involvement of intermediaries have led to an increasing complexity of employment relationships (Wells Jill & Arthur Jason, 2010). The informal economy itself is traditionally viewed as the deprived or disadvantaged sector employing unskilled, less educated and urban migrants. Thus, it plays a negative role in the economy by decreasing official output, reducing government tax revenue and constraining the growth of the private sector.

Furthermore, the informal employees lack social security coverage and some or all of the protections provided by labour contracts. In many cases, the informal sector has been referred to as street vendors, domestic workers or unregistered small-scale activities in developing countries. Legalistic definition of informality refers to the avoidance of formal registration, taxation and the lack of social security protection (Tchakounté Njoda Mathurin and Ulrich Gaetan, 2016). Informal sector activities are different in nature but such activities are largely ignored, rarely supported or regulated and sometimes actively discouraged by the state government. The presence of many opportunities in the informal sector provides a wide option for those who engage in it. People seek for jobs in the evenings, weekends, or during the day. The low skilled individuals have strong encouragement to migrate in the region in search of manual jobs. They may not find any employment in the rural areas. The educated workers find that their human capital is better rewarded in the Mumbai Metropolitan Region.

Therefore state government must provide training to the unskilled workers. It will help them to increase skills and income. Such income is important to buy nutrition and various physical assets in house. Their standard of living can increase in region. Such workers can visit health care facilities and take care of health. It further improves their productive capacity. They can easily come out of poverty trap. The concerns of informal economy workers and particularly women workers can be easily overlooked in the process of policymaking and legislative change. Since the urban space the women informal workers have occupied is not theirs and that government should mitigate plans to encourage the women who are engaged in informal sectors to have urban space for operating the units as it helps both in the economy as well as in welfare of the society (Bhuyan Zona, 2013).

Health care facilities must be provided to workers. Health staff must regularly visit households in slums of region. They can provide suggestions on contraceptives, mother child health and immunisation. Health care must be provided at door step to workers. Such efforts will increase the productivity of workers. Health workers do not talk nicely, treat and consult properly. The workers economic contribution is high in region. Therefore they must be provided health care on urgent basis. Urban kutcha slums are treated as unauthorised settlements in region. They should not be neglected in terms of provision of infrastructure facilities such as education, water supply, sanitation, power supply, etc. The provision of such facilities will certainly help workers to improve standard of living and productivity. Water supply needs to supply at the door step of workers. Sanitation must be provided in kutcha slums in region. The main determinant of informal employment is the level of education. Education is the

main variable for employment. Improved policies on the levels of education should be given emphasis as better education will drive individuals from being informally employed to formal employment.

More so, improvements in the production units of the informal firms will improve the quality of jobs for educated individuals. Youth employment in the informal sector provides less to the economy in terms of taxes. The majority of individuals employed in the informal sector are the youths in region. Therefore efforts to create formal employment for the youth would ultimately guarantee income to the economy and improve the welfare of the youth. Policy makers should take special initiatives to ensure that the youth are trained in specific careers that would lead them to the quality jobs they deserve. The informal sector is a last resort for the poor individuals with less education to earn a living. Therefore, a policy on social security should develop that would accommodate individuals working in the informal sector (Rukundo, Johnson Bosco 2015). Banks must provide loans to the poor people of slums. Government should legalise the housing of poor.

The poor people must be provided the food through public distribution system. Radio, television programs must be prepared for workers. Age at marriage must be increased in the slums. Women empowerment is most required aspect in slums. Such policies will reduce malnutrition among workers; improve knowledge, access to health care, water and sanitation facilities. It will improve the standard of living of workers working in the informal sector in region.

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