SOCIO ENVIRONMENTAL IMPACTS ON SUSTAINING LIVELIHOOD OF FEMALE WORKER COMMUNITY OF SOUTH 24PARGANAS, WEST BENGAL

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Abstract: In India, with increased participation of middle-class educated women in the organised labour market, job opportunities in domestic service are being created for many disadvantaged groups or sections of women with limited opportunities. They work forsurvival, assumption being that poor women work to make up the difference between subsistence requirements and the total earnings of the family.

In 2016-17, a primary survey of 300 part-time female domestic workers was conducted in the district of South 24 Parganas in West Bengal. The motive of the survey was to show that an expansion of South 24 Parganas is creating job opportunities for poor women in the informal sector, especially in the domestic labour market. Analysis of work participation of poor women cannot be comprehensive without an insight into the environmental, demographic and socio-economic characteristics of the workers household. This paper studies the above, along with the intensity of poverty of the households and the factors that compel women from poor households to participate in wage-earning activities. Descriptive statistical techniques and regression models were used to explain and analyse the data. The results of observation, interview and analysis reveal that factors like wage, household expenditure and child education as independent variables influence the working hours of the domestic worker and there exists a gradation in wage rate as per type and locality of work.

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Introduction

With important changes in the society and labour market, more women are now associated with paid work.Therefore, on the one hand, we have households with women in paid jobs and on the other,we have non-working women. Both working and non-working women hire female workers who work as substitute workers in employers' house in managing household chores. West Bengal, among 15 major states of India, has one of the highest incidences of domestic service since colonial times. Chakravarty (2008) shows that in urban West Bengal,women's share in domestic service increased by 30 percent during 1971-1991, and is still emerging as the main source of informal work for women. One reason may be that women from poorer families are forced to enter the job market to sustain livelihood. However, Kundu (2007) stated that although this sector plays a central role in women's employment, wages, hours of work, number of working days, nature of payment and other conditions of work are not uniform. This emphasizes the vulnerability of domestic workers.

Domestic workers are employed for household work like cooking, cleaning and mopping, washing utensils and clothes, and as elderly and child caretakers. A domestic worker can be categorised as part-time, full-timeor live-in based on the hours of work and the nature of employment. There are empirical studies mentioning the disadvantages of the low paid domestic workers in India, but this paper studies the condition of female domestic workers in the context of south 24 Parganas district of

West Bengal. The purpose of this study is to examine i) the basic demographic features of female workers ii) the intensity of poverty of the households and iii) the socio-environmental impacts on livelihood sustainability.

The survey area and the sample

South 24 Parganas extends from the metropolitan Kolkata to the remote riverine villages upto the mouth of Bay of Bengal. It is the largest district (9960 sq. km) in West Bengal and the second largest in population (18.17 percent). The rise in population in the south sub-urban areas of the district over the last 15 years can be attributed to the existence of a large number of Bangladeshi migrants as stated by Kumar (2010) and evidences of large scale commuting of unorganized workers as stated by Roy (2003). 84% of the population lives in the rural areas and the remaining 16% population live in urban areas. The scheduled caste comprises 39 percent of the total population and B.P.L. families constitute 37.21 percent of the population.

Taking into account the diverse nature of the district, a sample of 154 working women was selected through careful application of purposive snowball sampling method noted by Patton (1991). It is observed that middle class and upper middle-class households employ more than one female worker to manage daily household activities and to maintain an alternative arrangement in absence of one maid. So in the second step 300 domestic maids working in 154 households were chosen and listed under rural, sub-urban and urban areas. They were further categorized into locals (75.4 per cent), slum-dwellers and commuters (12.5 per cent travel in local trains, 6.9 per cent travel in bus and 5.2 per cent travel in bicycles or auto – rickshaws).

Methodology

Secondary information about population and infrastructure was collected from the District Census Handbook. The primary data was collected from the field survey in 2016-17. A structured questionnaire was administered in a face-to-face interview with the consent and voluntary participation of the respondent domestic workers. The questionnaire had provisions to collect details on the following aspects:

- Personal information on age, education, caste, occupation (primary/secondary), family income, women's contribution to family income, etc.

- Living and working conditions, like housing, type of house, number of living rooms, water supply, sanitation, drainage of water, household waste disposal, access to electricity, etc.

- Household information on aspects such as possession of assets, consumption expenditure, borrowing, expenditure on education and health, etc.

The questionnaire primarily consisted of short, close-ended questions, with appropriate coding categories. Data on the economic status of the households were validated with the consumption expenditure approach of Himanshu and the Multi-dimensional methodology. All general and economic factors relevant to the study were explained with descriptive statistics. Appropriate statistical methods were used for economic analysis of the data.

Plan of the study

Section 1 studies the demographic characteristic and intensity of poverty of the female domestic workers in our study area. Section 2 outlines the economic profile of the

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[2]If a worker performs some definitive duties at one or more than one house and goes away daily when the assigned work is over within not more than two and a half working hours from a particular house on a monthly salary basis is treated as a part-time domestic worker.

[3]A worker who works for a single employer every day for a specified number of hours and returns home after work.

[4]A worker who works full time for a single employer and stays in the house of the employer or premise provided by the employer.

[5]Snowball sampling is a chain-referral sampling and non-probability sampling technique where existing study subjects recruit future subjects from among their acquaintances. Thus, the sample group is said to grow like a rolling snowball.

domestic workers' household and the social status of women. Section 3studies the impact of factors on sustaining livelihood of the female workers.

1.1 Basic Demographic features

This section comprises of the basic demographic features of the sample households. The religion and social category of the domestic workers are given in Figure -1.

In our sample, 41.7 percent of the workers are scheduled caste, 29.3 percent belong to the general category and 14.7 percent female workers are OBC category. Among the migrant workers, 23 per cent are slum dwellers and 19 per cent are squatter settlers. The squatter settlers are usually transient migrants living in squatters near husbands' work place.

Figure -1
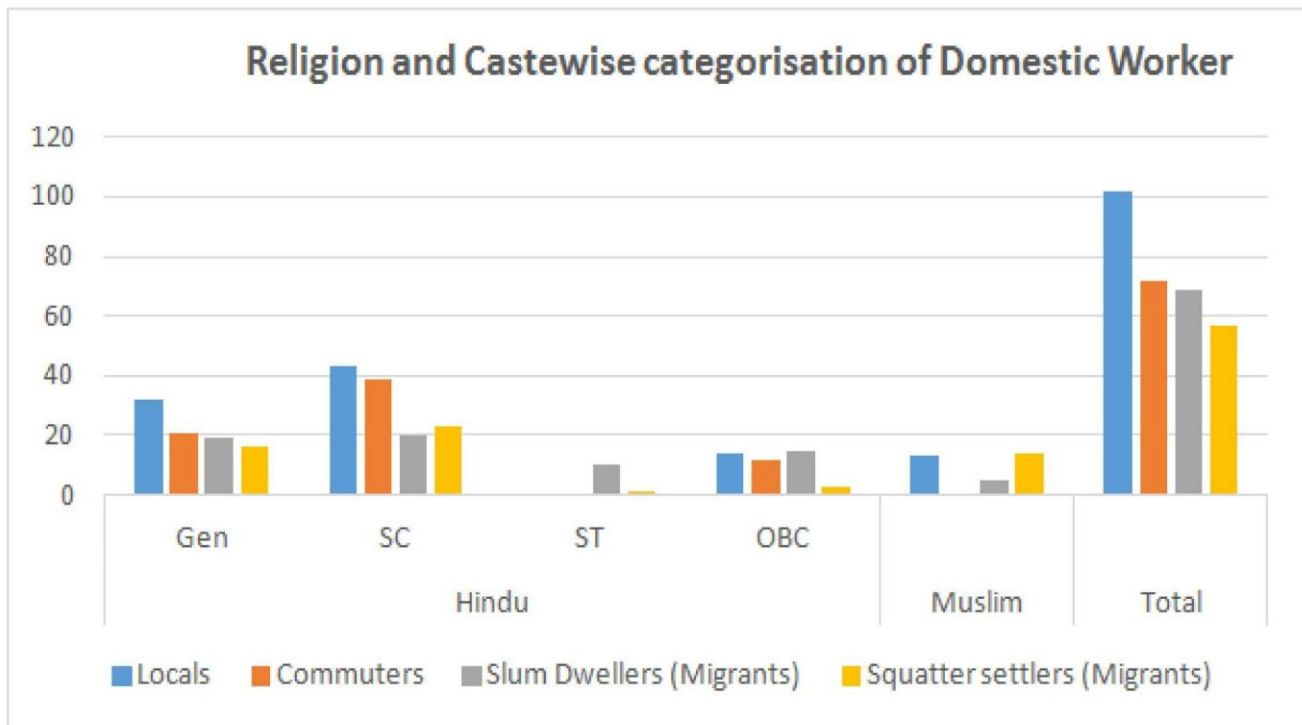
Source: Primary Survey, 2016-17

Large familieshad 6 members and the maximum number of children in the surveyed household is 3. The composition of the household mainly consist of the head of the family, the wife (respondent in our study), children and sometimes the mother-in-law. The head of the household is the husband unless the respondent is

unmarried or widow. The optimum wage is obtained by increasing the number of houses serviced subject to age constraint. Table-2 shows the distribution of female domestic workers according to age and number of houses serviced.

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[6]The commuters living closer to the city and with transport connectivity try to take advantage of the wage gradient and minuscule rents prevailing in rural areas by commuting to the nearby urban areas.

Table-2 Distribution of female workers according to age and number of houses serviced

Age	Number of houses serviced							Total
	1	2	3	4	5	6	7	
21-30	2 (2.89)	12 (17.40)	21 (30.43)	19 (27.54)	15 (21.74)	0 (0)	0 (0)	69 (100)
31-40	3 (2.56)	20 (17.09)	34 (29.06)	20 (17.09)	23 (19.66)	11 (9.40)	6 (5.13)	117 (100)
41-50	2 (2.44)	14 (17.07)	28 (34.15)	16 (19.51)	12 (14.63)	8 (9.76)	2 (2.44)	82 (100)
51 and above	2 (6.25)	8 (25.00)	12 (37.5)	6 (18.75)	4 (12.5)	0 (0)	0 (0)	32 (100)
Total	9 (3)	54(18)	95 (31.67)	61 (20.33)	54 (18)	19 (6.33)	8 (2.67)	300 (100)

Source: Primary survey, 2016-17

Education is the foundation of progress. Various factors like gender-based inequality, social discrimination, high dropout rates and occupation of girl child in domestic chores impede the education of women. A look into the literacy level of 300 female domestic workers in our sample shows that 40.6 per cent (21.3 % + 19.3%) of women have never attended school and only 20 per cent of the workers have been to school for primary education. Women with secondary or post-secondary education merely form 2 per cent. But it is also observed that literacy level or consciousness regarding child education is higher among city-based young workers and the education of girl child is mostly dependent on the income of the female worker.

The age, social status and education of the female workers give us an insight into the demography of our sample, thereby raising the need to examine the association between demographic and socio-economic factors.

1.2 Intensity of poverty of the households

To provide minimum protection to the poor through social assistance schemes, their proper identification is necessary. In our sample, 85 percent of families were identified as poor as per the methods adopted by the Ministry of Rural Development. But our estimation of consumption expenditure reveals that the per-capita expenditure on food of 81 per cent households is less than the state updated poverty line of 2014-15 (972 for rural and 1407 for urban areas). This points towards a slight difference between the identified and estimated number.

In order to address the difference, multidimensional methodology was used to identify multiple deprivations at the individual level in education, health and standard of living (Table-3). The three dimensions consist of ten indicators. If people encounter deprivation in at least one-third of these weighted indicators, they are multidimensionally poor.

Table-3: Dimensions, Indicators and Cut-offs for poverty measure

Dimensions	Indicators	Poverty Cut off
Standard of Living	Housing	Live in a kutcha house
	Electricity	No access to electricity
	Sanitation	Uses no facility/ uses bush/ composting toilet, pit latrine without slab
	Cooking Fuel	Uses coal, animal dung, wood
	Drinking water	Uses unprotected well and spring, river, pond
	Assets	The household does not own more than one of these assets: TV, Radio, telephone, computer, animal cart, bicycle, motor bike or refrigerator
Health	Nutrition	An adult under 70 or a child is undernourished
	Child Mortality	A child death in the last five year
Education	Years of Schooling	No members completed primary education
	School attendance	A school aged child is not attending school

Source: Human Development Report (2011), UNDP

In our sample, 29 per cent respondents lived in *kutcha* houses and faced overcrowding. Migrant workers lived in rented houses or in temporary accommodations near husband's work place. The sanitary condition of these workers was found unhygienic. Though 96 percent of the households hadaccess to electricity, there were cases of hooking, especially for slum-dwellers.The source of fuel for 77 per cent households was LPG. Mobile phone was common, 53 per cent had a television with a cable line and only two households had a motor-bike. In the first dimension, though households in our sample fared well concerning electricity and the use of clean fuel, the households were considered poor mainly due to poor living conditions. In the second dimension, 43 households had poor health condition as well as reported child death. In the third dimension,40.6 per cent of the workers have never attended school.

The poor status of the female workers is clear from both the consumption expenditure approach as well as the indicators of the multidimensional approach like poor living condition, low economic status, low literacy and lack of assets. The discrepancy observed is in the institutional level, but the poor people actually identify their state of deprivation with a broad range of dimensions that are listed in the multidimensional poverty. The general and economic profile of the female domestic workers are discussed in Section 2.

2. General and Economic profile of the households

The male member (when he is the head of the family) normally meets the basic transaction needs of the domestic workers' household, but the remittances created by the domestic worker is a vital source of support for receiving households. They use it for investment in child education, health care, improvement in household food and security, water and sanitation. The descriptive statistics (Table-4) reveal the following.

Table-4: Descriptive Statistics

Variables	Mean	Median	Mode	Standard Deviation	Range	Minimum	Maximum
Number of houses serviced	3.33	3	3	1.44	6	1	7
Hour of work	4.30	4	4	1.40	6	1	7
Journey time(in minutes)	24.22	20	15	16.58	70	5	75
Total Members	3.15	3	3	0.98	5	1	6
Age	36.44	35	35	8.51	38	22	60
Number of child below 15 years	0.46	0	0	0.67	3	0	3
Hourly Wage	31.42	33.33	33.33	9.93	54.17	12.50	66.67
Income of other members	5393.08	5700	6000	2581.21	14000	0	14000
Year of schooling	3.19	3	3	1.66	11	0	11
Education and Medical expense	446.85	300	200	419.84	2200	0	2200
Savings	649.23	500	500	311.85	1800	200	2000
Own land in Katha	0.78	0	0	0.27	20	0	20

Source: Calculated from the author's database

- 47 per cent of the female respondents in our sample work for 3-5 hours in a day and 34 per cent work for 5-7 hours.

- Large cultivable lands are located in the rural areas or fringes of the sub-urban areas.1 '*bigha* (20 *kathas*) is owned by thirteen households. 29.3 per cent of the households own only 0.78 *kathas* of land on an average. Most households living in urban and suburban areas have small '*chataks'* of 'high land' suitable for cultivating vegetables for sustaining livelihood.

- The income of other members (husband or other working adults)of the household ranges between INR 700-11000.

- Expenditure on education (remuneration of private tutors, cost of books etc.) is generally observed when the respondent worker is young and there are one or more children in the household, or when the respondent worker is aged[9] and has grandchildren in her house.

- Mean hourly wage of the worker is INR 31.42.Total number of years in the occupation and in the same household is a reliability factor. A yearly increment at the rate of 10 per cent or between INR 100 - 200isreported by 90 percent of the workers. This results in a higher wage for a veteran than a new entrant in the job market.

- The wage rate is high for cooking. Work as a cook enables female workers to earn more and avoid 'dirty work'. The wage rate also depends on location of workplace (Rural or Urban), experience and type of unit (Residential complex or '*para*'). Figure-2shows the variation of wage rate in urban and suburban areas as per the working hour and the type of work.

Figure-2: Prevailing wage rate in urban and sub-urban areas

Prevailing Wage rate

Source: Primary Survey, 2016-17

- The mean savings for the sample household is INR 650. Savings is high in households with higher income or small family size. Saving for the female domestic workers is not always formal and sometimes they hand over their entire earning to the head of the family, thereby saving nothing.

A study of their economic condition indicates that low earnings from employment constitute the main source of poverty. Though cultivation and casual manual labour seem to draw a large number of women in rural areas, such work is entrusted with very meagre earnings especially under the purview of gender discrimination.

Jobs opportunities are thus more important than any anticipated wage differentials, and the involvement of these women in wage-earning activities is a guarantee for men against unemployment and disease, against inflation and wage cuts or losses in their small businesses.

3. Impact of factors in sustaining livelihood

There exists a nexus between urbanisation and agricultural land. Changes in land values and land markets around cities often results in the land left vacant as the owners anticipate the gains from selling it or using it for non-agricultural uses. The poor households in urban or sub-urban setup, are therefore exempted from engaging in agricultural activities. Their household earning is limited to engagement in some casual or informal activities. In such a situation and with the presence of an active social network among the workers, the women of the household can at best find a job in the domestic labour market.

To capture the decision making factors influencing an intended domestic worker to take this job, we formulate two regression models with the following explanatory variables and hypothesis:

- Age has an impact on work participation (H_1)

- Younger children in household restrict hours of work (H_2)

- A worker tries to maximize her wage by increasing hours of work (H_3)

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[7] In West Bengal 1 Bigha = 20 Katha
                1 Katha = 16 Chataks

[8] Para is a Bengali word which means a neighbourhood or locality, usually characterised by a strong sense of community.

- Ownership of cultivable land restricts a woman from joining the workforce (H$_4$)

- Working women in any household upsurge the education of the child (H$_5$)

- Increasing household expenditure positively influences her hours of work (H$_6$)

- There is a vertical gradation of the domestic workers'wage rate according to the environment (residential area/locality)in which they work (H$_7$)

Model 1: This model regresses the decision making factors like the age of worker, land owned, number of children under 15 years of age, wage of the domestic worker as a percentage of household income, household expenditure and expenditure on the education of the child on Hours of work. Working hour is an important variable that enters wage calculation and is taken as a proxy for the domestic workers. Here we assume that u obeys all the necessary assumptions required to estimate the above equation through OLS method.

Hrw = α$_0$ + α$_1$ age + α$_2$ Noch_15 + α$_3$ Wage + α$_4$HHexp + α$_5$OL + α$_6$Ex_Edu + u$_1$

Where,

Hrw = Working Hours

Age= Age of the domestic worker

Noch_15 = Number of children below 15 years of age in the respective household(Children = 1, No children = 0)

Wage= wage as a percentage of household Income

HHexp= Consumption Expenditure (Education of the child is not included here)

Ex_Edu = Expenditure on the education of the child

Estimated equation

Hrw = 1.56 + 0.006 age – 0.38**Noch_15 + 0.02*** Wage + 0.001***Ex_Edu + 1.25*** OL + 0.0002***HHexp

Where R^2= 0.28

And (p*** <0.01) ⇒significant at 1% level, (p**<0.05) ⇒significant at 5% level

F= 8.14Significant at 1% level

Interpretation:

a. The effect of age on working hours though positive is insignificant (p > 0.05). We should maintain the null hypothesis that age has no involvement on work participation of female workers.

b. The increase in the number of children below 15 years of age is negatively related to working hours. A mother with a child under fifteen cannot devote much time to paid work. In order to look after her children and prepare food for them, she has to return home by noon.

c. Wages are not very high for a domestic worker. It does not follow the' Minimum Wage' norm. The worker has to intensify their hours of work to upsurge income. In this way, their share in the household earnings can be increased, thereby improving social status at home.

d. The domestic worker has to increase working hours to bear educational expenses for her child. The field survey shows that most of the domestic workers do not want their girl child in the same profession. They always encourage and send their children to schools. Though the government schools are free, the part-time workers have to work for more households to supplement other educational expenses like purchase of books and stationaries and for the remuneration of private tutors.

e. Ownership of land has a positive impact on the working hour. In our sample, the workers are scattered in the rural, suburban and urban areas of the district. Only about 5 per cent of the surveyed households living in rural areas possess more than 1 *bigha* land. Such households do not have any dearth of staple food. Others have only a few *katha*or *chataks* of land used for subsistence cultivation of seasonal crops. There is always a shortage of cash to meet other expenses. Besides, workers living in sub-urban or urban areas do not have agricultural land. Possession of land therefore, is not a distinguishing characteristic of a solvent household and cannot be maintained without the female member's income.

f. Household expenditure has a positive impact on the working hour of a female domestic worker. Household expenditure can risedue to inflation, large family size, job loss of the head of the family, etc. Large family size increases consumption expenditure. To combat irregular income of other family members, the female worker increases her working hours.

Model 2: This model is formulated to ascertain the effects of type of work, travelling time, wages, year of work in a locality on the likelihood that domestic workers prefer residential complexes to '*para*' for work. As already mentioned, with the expansion of south sub-urban Kolkata, both agricultural and vacant land is being used up for the same.

Li = (Pi /1-Pi)= β_0 + β_1 TPW + β_2 TTR + β_3Wage + β_4 YOW + u$_1$

Where,

P_i = 1, if the worker works in a housing complex and

P_i = 0, if the worker works in a para

Wage = Wage rate (The maximum wage as per type of work is considered)

TPW = Type of work (Cooking = 1, others = 0)

TTR = Time of Travel between the residence and the first worker's house (< 30 minutes = 1, others = 0)

YOW = Year of Work

<u>Estimated Equation</u>:

L* = -5.262 + 0.003 *** wage – 0.039 TTR + 1.051 * YOW – 2.637 ** TPW

This model is statistically significant with NagelkerkeR^2 = 61.3

(p***< 0.01) ⇒significant at 1 per cent level, (p**< 0.05) ⇒significant at 5 per cent level, and (p*< 0.10) ⇒significant at 10 per cent level

Interpretation:

We can explain the above probability model in the following way.

• We have observed that the husbands of the respondents are mainly working as informal and casual workers with unstable income. The income of the female worker is a critical source of sustenance strategies for respective households. Although the key concern of a part-time worker is finding a job, she is aware of the prevailing wage gap in urban - sub-urban areas and apartments and 'paras' within the same locality.

• Travelling time of a female domestic worker has no significance with her preference for working in a residential complex or a 'para'.

• In our survey area, the prospect of getting work expanded with mushrooming growth of housing estates over the last few years. Years of working a particular area helps the worker develop a strong social network that keeps them well informed about expanding opportunities in the area. The maids already working within the area try to secure new work with higher pay in the housing estates. The travelling time between workplaces being negligible, they can maximise income by increasing number of houses serviced in stipulated time.

• Cooking requires some skill, and generates higher wages when outsourced. Here, the preference for workplace depends on their years of work in a neighbourhood. So to get a similar job in an apartment, the female domestic worker does not leave her old job. On the other hand, she prefers a residential complex for other types of work like cleaning, mopping, washing etc., where she can serve for more houses in her stipulated time.

The results of the probability model show that the journey time does not contribute to her preference for work in any locality. Their preference for type and place of work (considering cooking as a control variable) illustrates her choice for a residential complex only when she works in

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[9]The residential complex is a classification of housing where multiple separate housing units for inhabitants are contained within one or several building within one complex.

'piece rate'. The positive and significant relation between her earning and choice of place of work unveil the existence of a vertical gradation of wages. Domestic workers set their wage norms and in effect operate a 'closed shop' system to enforce their employment in a residential complex. This deviates from the findings of Banerjee (1985)whohighlighted the changing economic and social role of poor women in India and showed domestic service as a market where wages are determined by what the customer can afford to pay.

Conclusion:

This study is a modest attempt to analyse the socio environmental impacts on sustaining livelihood of female workers. Keeping in mind the discussions that have taken place on the female domestic workers in the literature, we looked into the demographic and socio-economic conditions of the female domestic workers in South 24 Parganas district of West Bengal. As Carr et al. (1996) puts, while all marginalized sections of the population have limitations in economic opportunities, women face severe challenges due to constraints that are women intensive. At extremely low levels of education and income, some women have no option but to join workforce for sustenance. The responsibility of the household head is sometimes limited to his commitment of only feeding the family. Therefore, female workers has to meet all other expenditures.

This increases their workload, the time spent on unpaid household work remaining the same. With the increase in the total time required for paid domestic work outside home, the work burden of poor domestic workers increases to a great extent. Our study reveals that 47 per cent of the female respondents work for 3-5 hours in a day and 34 per cent work even longer (5-7 hours). The wage they get, vary with the number of houses, working hours, type of work and the composition of the population in different localities.

The remittances generated by a poor working woman are used for consumption, for educating children, and for improving household nutrition, etc. The income of the female workers is thus an important source of survival strategy for the receiving households. In addition to filling the gap between household earning and spending, the economic freedom of female workers might encourage women's empowerment in the respective society as a whole.

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[10]Piece rate system is a method of remunerating the workers at a fixed rate for each type of work done.

[11]Closed shop system in our survey describes an unrecorded agreement wherein the employer agrees to hire domestic workers from within the group of workers in society.

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