

**Factors Effecting Income of Men in Uchalan Village in Purba Bardhaman District,
West Bengal**

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1. Introduction

According to human capital theory, earnings are the product of one's time spent in paid labour and one's human capital investment in labour market i.e., experience, skills, training, etc. which is a function of the time doing paid work. As a result, responsibilities of unpaid work that is household works and family duties directly inhibits one's ability of earnings and investing human capital in paid work. As all individuals have a limited amount of energy, unpaid work inhibits: a) availability to work outside the home, b) productive capacities in paid work, and c) ability to accumulate human capital that lead to higher wages and earnings.

Housework consists of non-market activities which produce goods and service for the members of the household not desired in and of themselves, but rather for the utility which they yield. As per the National Sample Survey Organization (NSSO) data, 'Domestic Duties' are non-economic activities and therefore, it is not considered as a labour force.

In India, maximum men with more traditional attitudes are not involved in home production, actually they spend their more time and energy for investing human capital and earnings. So here maximum women are the unpaid workers and their availability of earnings inhibited by the men. But a man with less traditional views is involve himself in house production and support his woman's career. But whereas women with traditional mind consider even an unequal division of housework to be fair because it is corresponding to the standard they have followed.

A housewife ensures the smooth functioning of the household, but the work she performs at home is not recorded as an economic activity because these works are not a part of our market system and they do not receive any compensation through wage. But a female member is an important actor of men's working life. According to some researches, without the contribution of female works in house production, a man may not ensure to have active

income for his family members. In our country, women work longer hours than men, with more hours allocated to unpaid work such as subsistence production (including collection of water and firewood); household chores and care of children the elderly and the sick. If women are adjusted to their market work for domestic work, they will enable to invest their human capital in market system. When the female started to earn then the total family income will increase. As a result the family burden of men will decrease.

Men still earn more than women and continue to perform the less of the domestic activities. Less attention has been paid to the role of the female spouse unpaid work and to the extent that intrahousehold inequalities relate to inequalities outside the house. Time spends on this unpaid work by female maximize the working hour of male, because time spend by male member in household work less than a female member. Women seem not to profit from their partners' housework; instead, women's non-market work increases their partners' earnings while decreasing their own earnings. Married males are shown to work over 10 percent more hours than single males. Geist (2005) reported that the relatively higher income of husbands leads their wives to perform more housework.

Empirical research demonstrated that the negative effect of housework on wages is generally greater for men and depends on the kind of household tasks. Women spend more hours than men in home production and are usually involved in tiring, routine tasks immediately before or after market work (such as getting children ready for school or picking children up from school) which largely interfere with productivity. In addition, the relationship between wages and hours (both marketable and domestic) is more elastic for women than for men which suggests that women are more likely to adjust their domestic and market work. But a man does not want to do so. As all individuals have a limited amount of energy so a negative relation between wages and housework is to be expected. Considering how partners share domestic work, the time-availability perspective predicts that the partner who spends more hours in market activities does less domestic work.

So now this study will examine the relationship between male's earnings and female housework. Now the paper will try to find the effect of women's contribution of homemaking on income of man.

2. Motivation

For men in some occupations, housewives' contributions should lead to higher income. For example, agriculture, if wives employed in field with their husband, it will increase the income of husband. In addition, if wives who are not employed, contribute more to their husbands' careers than employed wives, men with non-employed wives should enjoy greater financial benefits than men with employed wives. Because non-employed wives do the household duties more than employed wives. In Uchalan where maximum people have middle class income. Most of the middle class women who face the greatest social obstacles in engaging in work outside the home, leaving them few choices to be full time housewives.

As a result, men have to take overall responsibilities of the family. According to the time use data from the National Sample Survey Organisation (NSSO) 2020, women spend 238 minutes (four hours) more on unpaid work each day than men in India. Women in India spend more than nine times the time spend by men on unpaid care work. In actual terms, this is what the gender disparity looks like – 297 minutes of women’s time a day compared with 31 minutes of men’s time a day. This is the result of a faulty concept of participation in the labour force that does not include household or domestic work as economic activity, because of the focus on use value rather than exchange value. This indicates a reason for the acceptance of men’s economic contribution and rejection of women’s economic contribution to the household income in particular and to society. Men’s work remains recognized and organized due to the fact that men’s contributions to the family income are vital. Though in many cases women are the breadwinners and work longer hours than men. In Bangladeshi families, income earning was usually the responsibility of males, while the remaining family member usually women and children are economically dependent. Homemakers worked longer hours in their household work but they remain invisible in terms of economic recognition as this work is treated as non-economic work and has no relation with family income. So, in our present subject we will try to see the contribution of wives in income, working hours, domestic working hours of his husband.

3.Literature Review

Some past researches have been done in this relevant area by the national and international scholars. Here in this section, we briefly represent the review of existing literature on the subject:

Ferrant et. al (2014), They tried to find that how can the time developed to unpaid care work of men be valued and what are the consequences of excluding household production from national accounting. This paper is based on the simple linear regression model. They found that gender inequality is present in unpaid care work of men. They also found that there was a wide variety in the labour force participation, wages and job quality of men. This unequal distribution of care work has the responsibility of social institution and stereotypes on gender role. The gender gap in unpaid care work significantly implies the men's ability actively to take part in the labour market and this type of employment opportunities easily available to them. But for this unequal distribution the women generally cannot take part in the labour market.

Mishra and Mallick (2019), They tried to find that how to value the service of a house-wife and how to access the market value of the household work of men to encourage them to do more household work in line with the cost approach. This paper is based on the opportunity cost and replacement cost method. They found that without including the housewife's contribution and the market value of the household work of men the GDP figures can never be accurate at the best they can undervalued. It is not about being paid; it is being about valued.

ADB (2014), Gillian Brown and Gi Soon Song discuss about time allocation decision. They try to find that are the men's time saving resulting from increased access to infrastructure or use for productive work that also reduce consumption poverty? Can infrastructure projects more effectively reduce both consumption and time for leisure hours and increase the income of the men. This paper is based on the simple Linear Regression Model. They found that time allocation for different activities between individuals within the household is influenced by gender division of labour and social and cultural norms. All over the world, men spent more time in paid work, whereas women work more than men and bear the burden of unpaid work

Nooran (2001), The author try to find the impact of domestic work on men's wage. This paper is based on the Multiple Linear Regression Model. The author finds that when both wife and husband are working outside, then the husband's economic burden will decrease and the household pressure of wife will decrease because her husband help in household work.

Daniel Carlson, Jamie L. Lynch (2015), They tried to find that husband's personal earnings and household work are reciprocally related. This paper is based on the simple Linear Regression model. They found that there is a relationship between one's personal earnings and one's time spend in routine housework. Their finding implied that if the husband spent more times in household work the earning of the husband will decrease.

Gulay TOKSOZ, Emel MEMIS, June(2020), They tried to present the differences in informal employment and hourly wages according to gender on the sub-branch level in the manufacturing sector in Turkey. This paper is based on the multiple linear regression model. It can be stated that in a country like Turkey where gender inequality remains strong, encouraging employers to hire women is insufficient; it is also necessary for the newly created jobs to provide social security benefits, for all employed have basic rights of association, and equal pay for equal work principles.

Sengupta (2016), He tried to figure out the labour force participation of men, their time-use pattern and the type of domestic activities they are involved in their monetary value. This paper is based on interview and regression. He found that average household work time of men is lower than his spouse and average time for leisure and personal care for men is higher than that of his spouse in both rural and urban areas.

Matteazzi and Scherer (2021), They tried to measure where women's non-market work increases their husband's earning and decreases their working time hours while decrease their own earning and increase their own working time hours. This paper is based on OLS (ordinary least square) estimation regression. They found that the housework of partner is equally important when evaluating the determinants of individual wages, working time hours and gender wage gap.

Sawhill et. all (2020), They tried to find men's contributions to family income have risen over the period. This paper is based on the multiple regression model. They found that families across the country are mainly dependent on men's monthly income. They also found that if men are continuing to get ahead and hence their families are to prosper then time squeeze of the families must need to be eased.

Hong (2020), The author tried to determine the factors affecting the income of men in non-state enterprises in Tara Vinh province (Vietnam). This paper is based on multiple regression analysis model. The study showed that there are a number of factors influencing the wages of workers such as occupation, working experience, education, working environment, ethnicity. This study is also including the developing adequate welfare policies for non-state workers

and vocational training for labourers, improving the working environment and adopting the credit policies to support ethnic minority workers etc. in order to increase the salary of the labourers in non-state enterprises.

Kenny (1978), The author tried to find that why married men are working so much in labour market. This paper is based on multiple linear regression model. The author found that one of the benefits of marriage is specialisation in labour force; married males spend more hours in the labour force than single males and thus have a greater incentive to invest in human capital. The author also found that the annual growth in wage rates when an individual is married is greater than the annual growth in wage rates for the same individual when is not married.

Bertrand et. all (2013), They try to find the establishment of gender identity in particular, an aversion to the wife earning more than the husband which affects marriage formation, the likelihood of divorce and division of home production. This paper is based on multiple linear regression model. They find that when a husband becomes more likely to earn less than a wife, then marriage rates decline. they also find that gender gap in non-market is larger if the husband earns less than his wife.

Paudel (2010), The author tries to examine the relationship between self-esteem of stay -at -home spouses and working men with respect to some selected socioeconomic variables, namely; marital status, husband's income and occupation. This paper is based on correlation and regression analysis. The author finds that if married men increasingly engage in continuous achievement -oriented work, then the number of men who are unemployed, stay-at-home spouses will decrease. The author also find that a successful husband can directly decrease the self-esteem of their wives.

Hamid (1994), The author tried to find how to develop a new system of National income accounting that better reflects men's contribution to the National income and how to decompose conventional GDP by gender and evaluate non-market work to be included in the measurement of GDP. This paper is based on interview and regression model. The author found that a more realistic estimation of GDP can be achieved only if the non-market work of men and women is accounted for and this methodology gave a GDP fig. that is 29% higher than conventional estimates.

Knowles (2008), The author tries to find the models of intra-household allocation which could be useful for understanding aggregate labour supply trends in the U.S. This paper is based on multiple linear regression model. The author finds that there is no strong relation

between wages and relative leisure of men. It is far from being an indicator by which household bargaining may be safely ignored.

Francine et. all (2005), The author tried to find the men's labour supply behaviour from 1980 to 2000. This paper is based on multiple linear regression model. They found that the reduction in the magnitude of men's labour supply elasticities imply govt. policies such as income taxes that affect marginal wage rates which have a much smaller distortionary effect on the economy.

Fontaine (2021), The author tries to investigate the effect of having a participating wife on the labour market behaviour of her elderly husband. This paper is based on multiple linear regression model (OLS). The author find that the magnitude of causal relationship is strong and the likelihood of husband's participation increases of about 19 points when their wives are currently active in the labour market.

Orkoh et. all (2021), They try to find men's and women's participation in household production improves each other's labour market participation and labour supply. This paper is based on multiple linear regression model. They find that men's and women's participation in household production significantly improves each other's labour market participation and labour supply. They also find that men increase their time spent in domestic work and primary child care with decrease in their absolute earning. This paper showed that govt. promotes equitable wage rates in labour market and prioritise policies such as paternal leave which encourage men to participate in household production.

PK Roy and et.al.(2017),They tried to measure the contribution of women to their household income, participation in decision making process, their perceptions and impact of income on decision making process. This paper is based on multiple linear regression model. They found that Women are silent workers and good partners of the socioeconomic development of the country in general and the family in particulate can contribute more to the socioeconomic upliftment of the family if proper environment and facilities can be ensured.

Ariffin R. ,1986: This study gave an overall view of Malaysian men, who occupied a lower position in their society as well as were being exploited by the interplay of various factor within the system. This paper is based on multiple linear regression model This essay explores the state of economic knowledge regarding the development of household economic life in the United States since early industrialization by examining explanations for the low labour-force participation of middle-class married men prevailing until the 1940s. These explanations, including those emerging from fertility studies and

resting on market forces, imprecisely specify the domestic roles of housewives. Interdisciplinary specification of these roles, drawing on social and cultural historians, and measurement of time allocation within the household would help resolve the various interpretations and assist in estimating the contribution of household work to social product.

4.Objectives

The variables that effect income of a man significantly these are age, education, number of children, secondary earner, place (urban /rural) occupation, according to Human Capital Theory. Here we want to examine the

relation between men's income and the household working time of men and women. The objectives of this study are:

1. Distribution of men's and women's time in household work.
2. Examine the impact of wife's household working time on her husband's income level.
3. Examine the monthly income of men and women.
4. Examine the relation between family size and working hours of men and women.

5. Methodology

We have randomly surveyed 30 people in Uchalan village of Purba Bardhaman District, West Bengal. The survey provides regionally representative data of families of Uchalan. We choose the data of male respondent where they all have marital status. The male respondent was chosen from different backgrounds randomly, i.e. farmers, mill worker, drivers, bus conductor, care giver at nursing home, garment shopkeeper, florist, municipality and masonry worker etc. We have used simple random sampling survey in this study. So basically, this study is based on primary data.

In this study, we define domestic work and working hours in outside as the total time spend engaging in a series of related activities within a 24-hour period on a typical working day. In order to meet the objectives, primary survey was done by using the structured questionnaires. The relevant survey questions are as follows "hours spend by men in household work and outside work" and hours spend by women in household work" and outside work", educational status of men and women partners, family size etc. Therefore, another main question was monthly income of men and women to test the hypothesis.

The sample data was first interpreted by descriptive statistics (mean, median, mode, standard deviation and range) and then it is represented by Bar diagram. The analysis of survey data was done by using the 3 variable multiple linear regression model and the significance of the model was tested through F-test, t-test and p-value in this study.

6.Results

This survey was conducted in Uchalan village of Purba Bardhaman district. As per the 2011 census of India data, Uchalan had a total population of 7439 peoples, out of which male population was 3778 while female population was 3661. Literacy rate of uchalan village was 68.87% out of which 74.62% males and 62.93% females are literate. The total working population in uchalan village was 40.4%. The total geographical area of uchalan village is 861.56 hectares.

For this study we have randomly drawn a sample of 30 men from uchalan village. This study is based on the primary data collected from uchalan. The main purpose of this study is to analysis the women contribution in male's income in uchalan village. This paper focuses on the discussion about the factors which affects the men income. By collecting and analysis the data of the income of men, number of family members, kinds of outside work done by men, hours spend by men in household work and outside work, hours spend by women in household work and outside work will show the effects of women household work on men's monthly earning in uchalan village. From the sample data we have calculated descriptive statistics (mean, median, mode, standard deviation, range) and drawn charts for both the dependent and independent variables. In this paper we will show the interrelation between monthly income of men, hours spend by men in household works and hours spend by women in household works in uchalan village by using Multiple Linear Regression Model.

Now we pictorially represent the monthly income of men.

Figure 1: Income of male

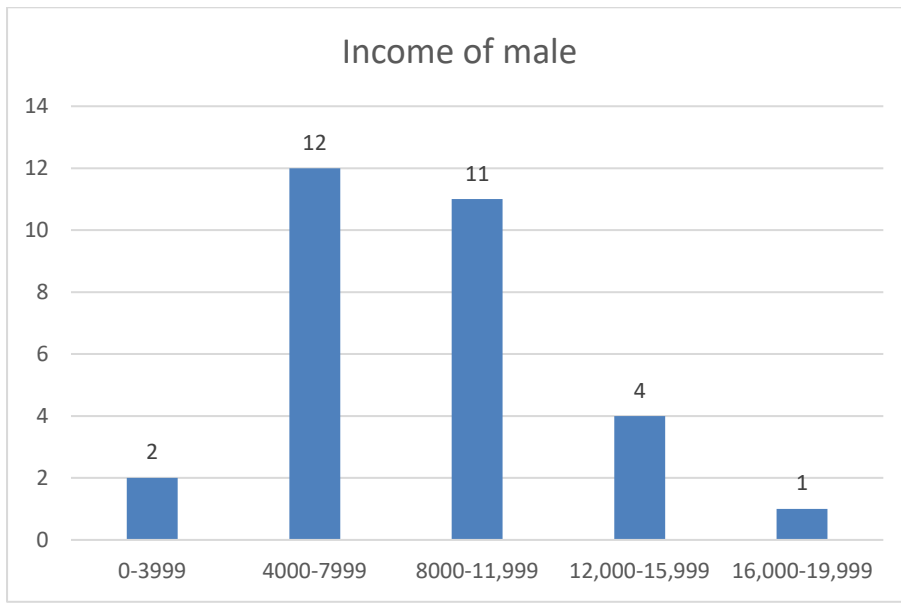


Figure -1 represent the income of male. In the fig. we see that among 30 samples ,2 men earn between RS. 0-3999, 12 men earn between RS.4000-7999, 11 men earn between RS.8000-11,999 ,4 men earn between RS.12,000-15,999 and 1men earn between RS. 16,000-19,999. Here the highest income is RS. 18000 and the lowest income is RS.2000. Here we see that most of the male (12) earn between 4000-7999.

The descriptive statistics of monthly income of men is shown in the table 1 given below.

TABLE 1: Monthly Income Of Men

	MONTHLY INCOME OF MEN OF THE HOUSE:
MEAN	8074.4
MEDIAN	8000
MODE	6000
STANDARD DEVIATION	3536.12
RANGE	16000
COUNT	30

The above table represents the descriptive statistics (Mean, Median, Mode, Standard Deviation and Range) of the monthly income of men.

From the descriptive data table, the Mean, Median and Mode of monthly income of men of the house are RS. 8074.4 ,8000 ,6000 respectively. The middle most income and most frequent income of the men are 8000 and 6000, per month respectively. The standard deviation of men income is 3536.12. The maximum income of men is Rs.18000 and the minimum income is Rs.2000. Range is the difference between the maximum and minimum values. Hence the range of the men income is 16000.

We now pictorially represent the monthly income of women.

Figure 2: Income of Women



Figure -2 represent the income of women. In the fig. we see that among 30 samples ,17 women earn between RS. 0-2999, 5 women earn between RS.3000-5999, 6 women earn between RS.6000-8999 and 2 women earn between RS.9000-11,999. Here the highest income is RS. 9000 and the lowest income is RS.0. Here we see that most of the women (17) earn between 0-2999. For equal class distribution we have included 0 as a possible income in our sample data. But 10 women do not have any wage income.

The descriptive statistics of monthly income of women is shown in the table 2 given below.

Table 2: Monthly Income of Women

	MONTHLY INCOME OF WOMEN OF THE HOUSE:
MEAN	3081.07
MEDIAN	1750
MODE	0

STANDARD DEVIATION	3233.71
RANGE	9000
COUNT	30

The above table represents the descriptive statistics (Mean, Median, Mode, Standard Deviation and Range) of the monthly income of women.

From the descriptive data table, the Mean, Median and Mode of monthly income of women of the house are RS. 3081.07, 1750, 0 respectively. The middle most income and most frequent income of the women are 1750 and 0, per month respectively. The standard deviation of women income is 3233.71. The maximum income of women is Rs.9000 and the minimum income is Rs.0. Range is the difference between the maximum and minimum values. Hence the range of the women income is 9000.

Now, let us test whether the average income of women is less than that of men, as we have observed in our sample.

To test the null hypothesis (H_0) which states that mean income of women (μ_E) is equal to mean income of men (μ_F) against the alternative hypothesis (H_1) which states that mean income of women (μ_E) is less than income of men (μ_F).

To test $H_0: \mu_E = \mu_F$ against $H_1: \mu_E < \mu_F$

Where E implies income of women and F implies income of men.

Computed t is denoted by t^* .

$$t^* = \frac{\sqrt{n}\bar{Q}}{s'_Q}$$

Here n (total number of samples) =30, $\bar{Q} = \Sigma(E-F)/n = -5193.33$ and s'_Q (standard deviation of Q) = 4280.342665

$$t^* = -6.65$$

For one-tailed test, the tabulated value of t under 1% ($-t_{0.01,29}$), 5% ($-t_{0.05,29}$) and 10% ($-t_{0.10,29}$) level of significance and 29 degrees of freedom are = -2.46, -1.70, -1.31 respectively.

Here, $t^* = -6.65$

Since, $t^* < (-t_{0.01,29})$, $t^* < (-t_{0.05,29})$, $t^* < (-t_{0.10,29})$

Therefore, the null hypothesis (H_0) is rejected and alternative hypothesis (H_1) is accepted at 1% level of significance, 5% level of significance and 10% level of significance

The test indicates that the mean income of women is less than that of men.

We now pictorially represent the Working Hours of Men and Women.

Figure 3: Working Hours Of Men

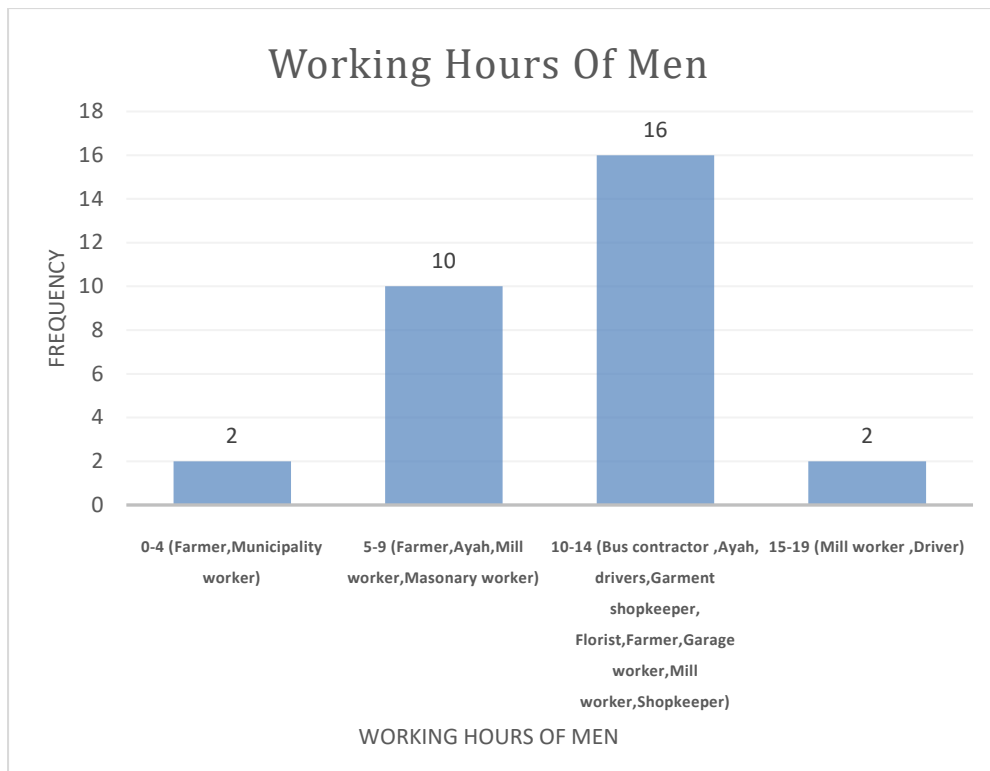


Figure -3 represent the working hours of men. In the fig. we see that among 30 men, 2men spend their 0 to 2hours on outside work, 10 men spend their 5 to 9hours on outside work, 15 men spend their 10 to 14 hours on outside work and 3 men spend their 15 to 19 hours on outside work. Here the maximum and minimum working hours of men are 16 and 2 respectively. So we conclude that minimum number of men (2) spend their 0 to 3 hours on outside work and maximum number of men (15) spend their 10 to 14 hours on outside work.

Figure 4: Working Hours Of Women

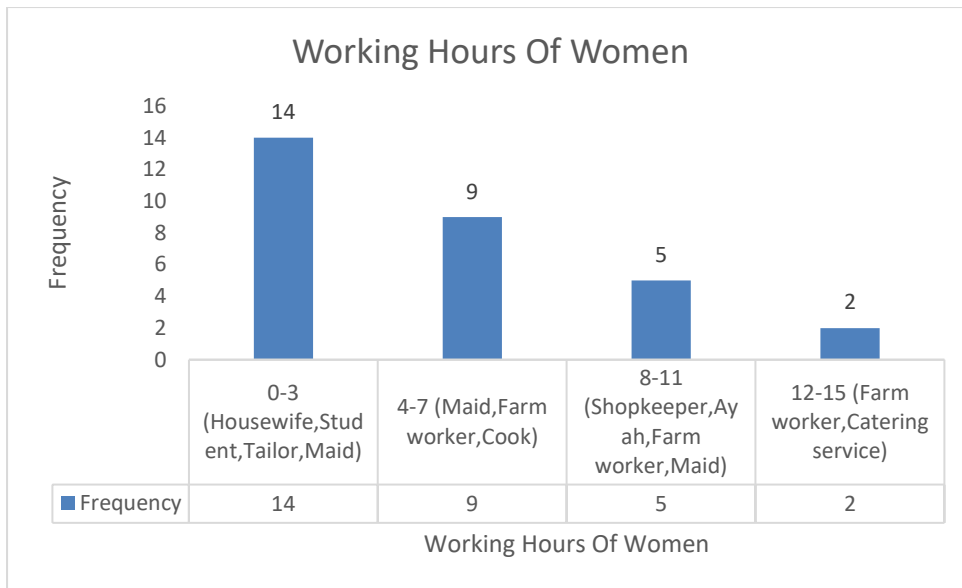


Figure -4 represents the working hours of women. In the fig. we see that among 30 samples, 14 women invest 0 to 3 hours on outside work, 9 women invest 4 to 7 hours on outside work, 5 women invest 8-11 hours on outside work and 2 women invest 12-15 hours on outside work. The maximum and minimum working hours of women are 14 and 0 respectively. Maximum number of women (14) spend their 0-3 hours on outside work. For equal class distribution we categorised our sample data like this. But 10 women do not work in outside.

The descriptive statistics of working hours of men and women is shown in the table 3 given below.

TABLE 3: Working Hours of Men and Women

	WORKING HOURS OF MEN	WORKING HOURS OF WOMEN
MEAN	9.73	4.33
MEDIAN	10	4
MODE	8	0
STANDARD DEVIATION	3.30	4.25
RANGE	14	14
COUNT	30	30

The above table represents the descriptive statistics (Mean, Median, Mode , Variance, Standard Deviation and Range) of the working hours of men and women.

From the descriptive data table, the Mean, Median, Mode of the working hours of men are 9.73,10,8 respectively. The Mean, Median, Mode of the working hours of women are 4.33,4,0 respectively. The standard deviation of the working hours of men and women are 3.30 and 4.25 respectively. So the standard deviation of the working hours of men is lesser than the working hours of women. From this we can say that men are more consistent with the outside work than women as we know that who have less standard deviation they are more consistent. The maximum working hours of men and women are 16 and 14 and the minimum working hours of men and women are 2 and 0 respectively. Range is the difference between the maximum and minimum values. Hence the range of the working hours of men and women is 14. Here we see that most of the women are not engaged with outside work but the women who are engaged with outside work they spend same time like a man. So their range is equal. We conclude that men's working hours is greater than the working hours of women as the most frequent working hours of men is 8 hours and the most frequent working hours of women is 0 hours.

By comparing the descriptive statistics and charts of the working hours of men and women, we can say that men spend more hours to do outside work than women.

Now, let us test whether the average working hours of women is less than that of men, as we have observed in our sample.

To test the null hypothesis (H_0) which states that mean working hours of women (μ_G) is equal to mean income of men (μ_H) against the alternative hypothesis (H_1) which states that mean working hours of women (μ_G) is less than working hours of men (μ_H).

To test $H_0: \mu_G = \mu_H$ against $H_1: \mu_G < \mu_H$

Where G implies the working hours of women and H implies working hours of men.

Computed t is denoted by t^* .

$$t^* = \frac{\sqrt{n}\bar{N}}{S_N}$$

Here n (total number of samples) =30, $\bar{N} = \Sigma(G-H)/n = -5.63$ and S_N ' (standard deviation of N) = 6.11

$$t^* = -5.48$$

For one-tailed test, the tabulated value of t under 1% ($-t_{0.01,29}$), 5% ($-t_{0.05,29}$) and 10% ($-t_{0.10,29}$) level of significance and 29 degrees of freedom are = -2.46, -1.70, -1.31 respectively.

Here we see that $t^* = -5.48$

Since, $t^* < (-t_{0.01,29})$, $t^* < (-t_{0.05,29})$, $t^* < (-t_{0.10,29})$

Therefore, the null hypothesis (H_0) is rejected and alternative hypothesis (H_1) is accepted at 1% level of significance, 5% level of significance and 10% level of significance
The test indicates that the mean working hours of women is less than that of men.

Here we pictorially represent the domestic work hours of men and women.

Figure 5: Domestic Work Hours Of Men

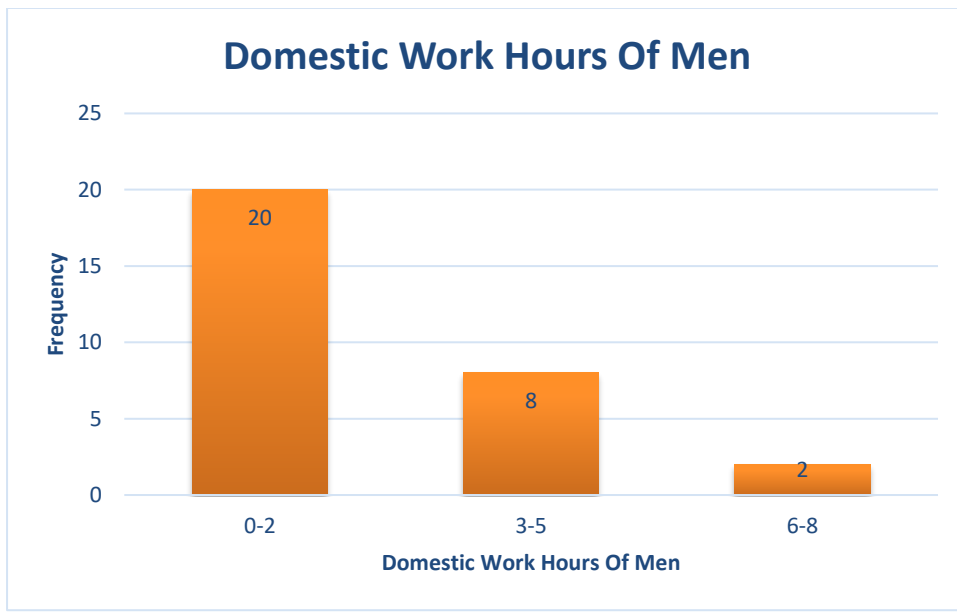


Figure-5 represent the domestic working hours of men. In the fig. we see that among 30 samples, 20 men spend their 0 to 2 hours on household work, 8 men spend their 3 to 5 hours on household work and 2 men spend their 6 to 8 hours on household work. Maximum and minimum domestic working hours of men are 7 hours and 0 hours respectively. So we conclude that most of the men spend(20) less hours ,i. e, 0 to 2 hours on household work. For equal class distribution we categorised our sample data like this. But 10 men do not help in household work.

Figure 6: Domestic Work Hours Of Women

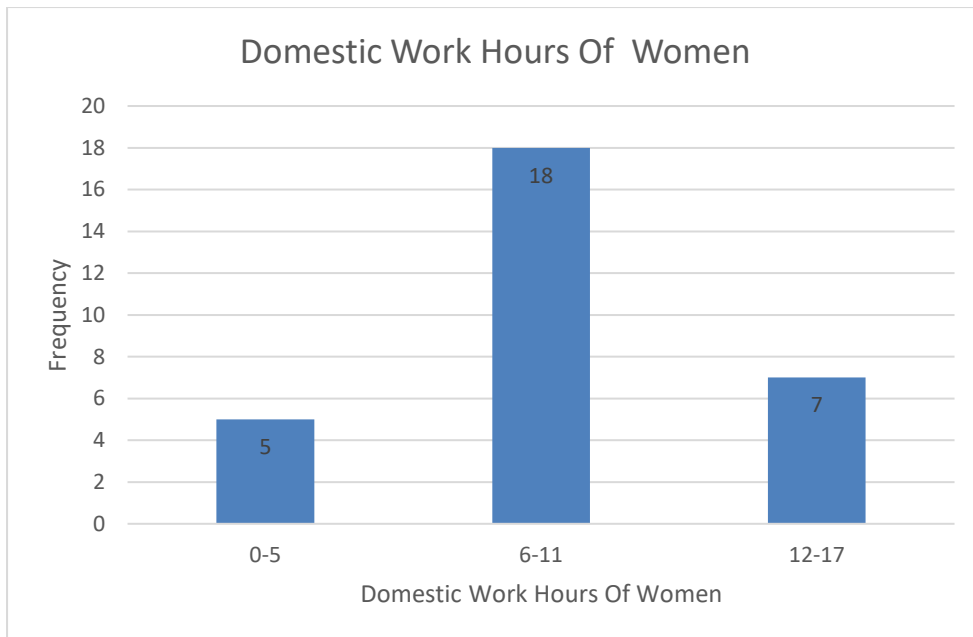


Figure-6 represent the domestic working hours of women. In the fig. we see that among 30 samples, 5 women spend their 0 to 5 hours on household work, 18 women spend their 6 to 11 hours on household work and 7 women spend their 12 to 17 hours on household work. Maximum and minimum domestic working hours of female are 16 hours and 2 hours respectively. So we conclude that most of the women spend (18) more hours, i.e., 6 to 11 hours on household work.

The descriptive statistics of domestic working hours of men and women is shown in the table 4 given below.

Table 4: Domestic Working Hours Of Men and Women

	DOMESTIC WORKING HOURS OF MEN	DOMESTIC WORKING HOURS OF WOMEN
MEAN	1.93	8.9
MEDIAN	2	8
MODE	0	10
STANDARD DEVIATION	1.96	3.51
RANGE	7	14
COUNT	30	30

The above table represents the descriptive statistics (Mean, Median, Mode, Variance, Standard Deviation and Range) of the domestic work hours of men and women.

From the descriptive data table, the Mean, Median, Mode of the domestic working hours of men are 1.93, 2, 0 respectively. The mean, median, mode of the domestic working hours of women are 8.9, 8, 10 respectively. The standard deviation of domestic working hours of men and women are 1.96 and 3.51 respectively. As the standard deviation of hours spent by

women on household work is greater than the standard deviation of hours spent by men on household work so women are more consistent with household work . The maximum domestic working hours of men and women are 7 and 16 respectively and the minimum domestic working hours of men and women are 0 and 2 respectively. Range is the difference between the maximum and minimum values. Here the range of the domestic working hours of men and women are 7 and 14 respectively. Here we see that men spend less hours on household work than women so their range is not almost equal. The most frequent domestic working hours of men is 0 and the most frequent domestic working hours of women is 10.

By comparing the descriptive statistics and charts of the domestic working hours of men and women , we can say that women engage with household work for more hours than men.

Now, let us test whether the average domestic working hours of men is less than that of women, as we have observed in our sample.

To test the null hypothesis (H_0) which states that mean domestic working hours of men (μ_I) is equal to mean domestic working hours of women (μ_J) against the alternative hypothesis (H_1) which states that mean domestic working hours of men (μ_I) is less than domestic working hours of women (μ_J).

To test $H_0: \mu_I = \mu_J$ against $H_1: \mu_I < \mu_J$

Where I implies the domestic working hours of men and J implies domestic working hours of women.

Computed t is denoted by t^* .

$$t^* = \frac{\sqrt{n} \bar{K}}{S_K}$$

Here n (total number of samples) =30, $\bar{K} = \Sigma(I-J)/n = -6.97$ and S_K ' (standard deviation of K) = 4.11

$$t^* = -9.29$$

For one-tailed test, the tabulated value of t under 1% ($-t_{0.01,29}$), 5% ($-t_{0.05,29}$) and 10% ($-t_{0.10,29}$) level of significance and 29 degrees of freedom are = -2.46, -1.70, -1.31 respectively.

Here, $t^* = -9.29$

Since, $t^* < (-t_{0.01,29})$, $t^* < (-t_{0.05,29})$, $t^* < (-t_{0.10,29})$

Therefore, the null hypothesis (H_0) is rejected and alternative hypothesis (H_1) is accepted at 1% level of significance, 5% level of significance and 10% level of significance

The test indicates that the mean domestic working hours of men is less than that of women.

Here we pictorially represent the family size.

Figure 7: Family Size

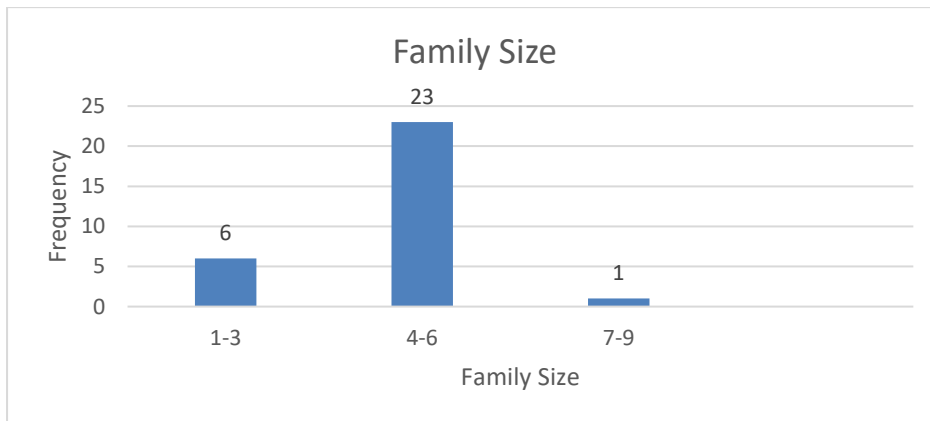


Figure -7 represent the family size .In the above table we see that 6 out of 30 households have 1 to 3 family members, 23 out of 30 households have 4-6 family members, 1 out of 30 households have 7-9 family members. Here we see that most of the household (23) have 4 to 6 family members .

TABLE 5: Family Size

	Family size
MEAN	4.5
MEDIAN	4
MODE	4
RANGE	5

COUNT	30
-------	----

The above table represents the descriptive statistics (Mean , Median, Mode , Range) of the family size.

From the descriptive data table the Mean ,Median, Mode and Range of family size are 4.5 ,4,4 and 5 respectively the data .The most frequent family size is 4. Range is the difference between the maximum and minimum values. Here the range of the family size is 5.

Now let us find out the relation between working hours of men and family size.

We see that the correlation coefficient between working hours of men and family size is 0.04 which is though positive but very low. Thus we can say that family size merely affected the working hours of men.

Now let us find out the relation between working hours of women and family size.

We see that the correlation coefficient between domestic working hours of women and family size is 0.12 which is though positive but low. Thus we can say that family size affected the domestic working hours of women.

Now we will check whether the domestic working hours of men and women have any influence on the level of income of men.

For this we take a two variable regression model where income of men is taken as dependent variable while domestic working hours of men and women are taken as independent/explanatory variable. The model is given as follows:

$$Y_i = \alpha + \beta_1 X_{1i} + \beta_2 X_{2i} + \varepsilon_i \dots\dots\dots (i)$$

Where Y_i implies, income of men

X_{1i} domestic working hours of men

X_{2i} implies, domestic working hours of women

α is the intercept term

β_1 and β_2 are slope coefficients

ε_i is the disturbance term

for all sample $i = 1,2,3,\dots,30$

Results of Regression:-

Table 1:

<i>Regression Statistics</i>	
Multiple R	0.69
R Square	0.47
Adjusted R Square	0.44
Standard Error	2656.86
Observations	30.00

ANOVA

Table 2:

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2.00	172029629.53	86014814.77	12.19	0.00
Residual	27.00	190590133.67	7058893.84		
Total	29.00	362619763.20			

Table 3:

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	2828.31	1451.08	1.95	0.06	-149.07	5805.70	-149.0	5805.70
Domestic working hours of men (X₁)	-327.30	251.53	-1.30	0.20	-843.39	188.79	-843.39	188.79
Domestic working hours of women(X₂)	660.55	140.86	4.69	0.00	371.53	949.56	371.53	949.56

In the above table Goodness of Fit (R^2) is 0.47, which implies that out of 100% variation in the income of men, 47% variation can be explained by the explanatory variables X_1 and X_2 jointly. The value of adjusted R^2 is 0.44, which implies that out of 100% variation in the income of men, 44% variation can be explained by the explanatory variables X_1 and X_2 jointly. Here we observe that R^2 is greater than adjusted R^2 which implies that as the number of explanatory variable increases, adjusted R^2 increases less than R^2 . The difference between R^2 and adjusted R^2 is that R^2 value assumes that all independent variables

Considers affect the result of the model, whereas the adjusted R2 value considers only those independent variables which actually have an effect on the performance of the model.

From the above table, $\hat{\alpha}=2828.31$ which means that if the domestic work hours of both men and women is zero then the monthly income of men is Rs. 2828.

$\hat{\beta}_1=-327.30$, this implies that ceteris paribus, for every additional hour of daily domestic work done by men, the income of men decreases by Rs.10. Since the p-value of $\hat{\beta}_1$ is 0.20 which is greater than 0.1. Therefore $\hat{\beta}_1$ is insignificant at 1%,5% and 10% level of significance.

$\hat{\beta}_2 =660.55$, this implies that ceteris paribus, for every additional hour of daily domestic work done by women, the income of men increases by Rs.22. Since the p-value of $\hat{\beta}_2$ is 0.00 which is lesser than 0.01,0.05,0.1. Therefore $\hat{\beta}_2$ is significant at 1%,5% and 10% level of Significance.

Hence, we can say that the income of men is driven by domestic working hours of women and domestic working hours of men has no significant effect on the income level of men.

For examining the overall significance of the estimated multiple regression model, we may apply the analysis of variance(ANOVA) technique.

$H_0: \beta_1 = \beta_2 = 0;$

$H_1: \text{At least one of } \beta_1 \text{ and } \beta_2 \text{ does not equal zero.}$

In the ANOVA table we get $F^* = 12.19$

$F_{0.01,2,27}=5.49$, $F_{0.05,2,27}=3.35$ and $F_{0.1,2,27}=2.51$

Now, we see that $F^* > F_{0.01,2,27} > F_{0.05,2,27} > F_{0.1,2,27}$

Hence the null hypothesis is rejected at 1%, 5% and 10% level of significance and there is over all significance of the estimated regression model. That is, we accepted the regression is significant and not all β_i 's are zero.

From the above relationship we can say that there is proportional relation between dependent variable(monthly income of men) and independent variable(domestic working hours of women). The relations are statistically significant.

7. Policy suggestion

Findings of this study revealed that the monthly income of men is influenced mainly by the domestic working hours of women. Domestic working hours of women has significant effect on the income level of his male partners. We have also found that domestic working hours of men has no significant effect on his own income level. The following can be suggested:

- I. Men may be encouraged by different ways so that they also help their wife in their household work. As a result both husband and wife do household and domestic work together.
- II. As the women spent more hours on household works, so the government should provide various transferred payments.
- III. Government should be considered about the financial freedom for housewives.
- IV. Recognition of the economic contribution of unpaid care work.

8. Conclusion

This study shows the relationship between monthly income of men and hours spent by men and women on household work. Autonomy theory, gender display and the relative resources hypothesis suggest that housework time is affected by earnings. Therefore, it is important to clarify this relationship by using our collected data and methods that explored the possibility of mutually reinforcing relationship between routine housework done by woman and earnings of a man. For wives, personal earnings is negatively affected by the more time spent in housework. But For husbands, personal earnings is positively affected by housewife's more time spent on household work. Women's housework, in particular, helps

men earn more, whereas women seem not to take much advantage in terms of wages from their partner's domestic work. Matter legitimizes wife's earnings as supplementary to reduce outside work pressure and family burden on his husband. In our study we find that income of a man affected by women's household responsibility. A man who spend more time in household work, his income will be affected. Women can increase their husband income significantly. This study is the first to test a relationship between relative earnings of household head and housework performance by women in that family.

From our descriptive statistics and pictorial representation, we notice that monthly income of men is greater than women. We also find that men are more consistent with outside work and less consistent with household work than women. From our results we can say that family size merely affects the working hours of men and women.

From our regression result we find that the monthly income of men is influenced mainly by the domestic working hours of women. Domestic working hours of women has significant effect on the income level of his male partners. We have also found that domestic working hours of men has no significant effect on his own income level.

Here it proves that men who spend more time in household work then they get less time for outside work. Hence their income will also be proportionally decreasing. Our regression analysis econometrically proves the inverse relationship between men's time spend in household work and their relative earnings. Income of men will rise by rising the time spend of women on household works. But this is an insignificant relation as our analysis proves that. Because women's household work time affects men's income but not much as it should. More Household duties done by women does not mean that men do not have to work in household. A man has to earn whether a woman do or do not spend time in household work. But if a woman increases her time spending on household chores that will be increase men's income. So, we can say that women are a part of men's increasing income.

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Appendix -1 : Questionnaire

1. Name of the respondent:

2. Age of the respondent and spouse:
3. Income of the respondent:
4. Income of his /her spouse:
5. Family Income:
6. Total Family members (no. of children, no. of old):
9. What is the occupation of the respondent?
10. What is the occupation of his /her spouse?
11. What kind of household work done by male?
12. What kind of outside work done by female?
13. How many hours spent on household work and domestic chores by (a)male (b) female

Appendix -2 :

Male Income	Female Income	Working hours of female	Working hours of male	Domestic Working hours of female	Domestic Working hours of male	Family size
9000	2700	11	6	11	1	6
8732	8732	8	8	10	2	4
15000	5000	11	10	14	0	4
12000	8000	6	12	10	1	4
6000	0	0	8	11	4	6
8000	0	0	13	7	0	4
5000	2000	4	12	8	2	3
6000	1000	2	8	6	2	4
13000	9000	6	6	13	0	4
3000	9000	5	5	4	1	4
11000	0	0	10	10	0	4
4000	7000	6	8	4	2	6
10000	0	0	11	8	0	5
8000	0	0	12	5	3	5
2000	0	0	13	7	2	3
7000	0	0	11	7	0	6
5000	4000	14	2	2	5	3
9000	0	0	7	10	0	6
6000	6000	11	11	6	0	8
6000	6000	12	12	5	3	5
8000	1000	2	3	8	0	3
5000	1500	3	8	10	3	4
8000	0	0	12	6	0	5
5000	1000	3	8	8	6	5
10000	1500	5	12	8	5	4
6000	3000	4	10	14	2	4
7000	4000	5	16	12	3	5
9500	0	0	15	15	3	3
12000	8000	8	10	12	7	5
18000	4000	4	13	16	1	3

