

**DETERMINANTS OF THE PAID AND UNPAID WORKFORCE IN THE  
SELF-EMPLOYMENT: A GENDERS' PERSPECTIVE EMPIRICAL  
ANALYSIS FROM LEH DISTRICT, LADAKH**

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DOI: 10.46609/IJSSER.2022.v07i09.002 URL: <https://doi.org/10.46609/IJSSER.2022.v07i09.002>

Received: 5 September 2022 / Accepted: 15 September 2022 / Published: 28 September 2022

**ABSTRACT**

The problem of gender disparity in labour market is a persistent global phenomenon and every country is doing its best to overcome it. However, the disparity is still persisting and moreover, it is going to take a long time to have gender parity because the problem is deeply rooted into the fabric of society. The paper mainly aims to study the factors which are responsible for unpaid workforce in the self-employment. Therefore, there are three main objectives. Firstly, to study the extent of gender differences in self-employment workforce. Secondly, to study the association between genders and the unpaid workforce and finally, to identify the determinants of paid and unpaid workforce. The study is based a primary data and it is a cross sectional data. The data is collected from 705 individuals who are in the self-employment category. The various statistical tools have been like mean and frequency in order to examine the extent of gender differences and, correlation and regression tests to study association and identify determinants. It has been witnessed that the males have higher representation in paid workforce and females in unpaid. Sector-wise, the rural people are more economically active than the urban people regardless of the gender. There is a significant association between genders and the unpaid workforce. The gender and age are the two main determinants of the unpaid workforce.

**Keywords:** Self-employment; Paid and Unpaid; Workforce; Genders; Leh-Ladakh

**1. Introduction**

The problem of gender disparity in labour market is a global phenomenon and why the gender equality is important? The structure of a society shows that females are always at disadvantage as compare to the men because these women rendering their service without any incentive. Look in to the self-employment labour force, the males have higher representation in the category of the own account worker or employer, whereas, the females have higher share in the unpaid

workforce. Why is it so? At the same time, leads to the question, why the females should have given an equal importance or rather opportunity? This is due to the fact that psychologically, women have a special tendency to think rationally in any kind of situation. Apart from this by ensuring gender equality, the world could not only able to ensure basic human rights to the females but also able to lay a strong foundation for a better future which is more peaceful yet at the same time sustainable. This way, the women ensure a better society and at the same time help in making the society socially strong and ultimately making a sustainable world more approachable, as the 5th Goal of the UN's Sustainable Development Goals to Gender Equality and the official statement for this is "Achieve gender equality and empower all women and girls" (United Nations). Therefore, recognizing their services into their families' self-employment businesses will make a great difference in boosting the confidence at micro level and gender empowerment and parity at macro level.

Hence, the primary aim of the study is to collect the information on the gender differences in the workforce especially that into self-employment because it has been learned that the representation from males is higher towards employer and own account worker category. While, the females have a higher share in the unpaid workforce into the self-employment. Thus, the study selected the study area to be Leh district from Ladakh UT. Before going into to analysis part, first let's take a look at the profile of the study area.

**1.1 A brief profile of Leh District (Ladakh):** Leh is one of the districts of a newly formed Union Territory of Ladakh in 2019. Prior 2019, it was a part of the erstwhile Jammu & Kashmir state, which was the northern most state of India. Moreover, the district itself is situated at the northern most tip of India, at an altitude of 11,880 ft above sea level. The district is located behind the Himalayan Range. Geographically, the district falls in the Arid Zone and at the same time due to low annual average rainfall, it is called as Cold Desert. Administratively, the district is the largest district area wise in the country. However, the district is not the largest in terms of population. Economically, the agriculture sector plays very importance from subsistence farming perspective because 2/3<sup>rd</sup> of the total population engaged in it and other important sector is the tourism providing employment opportunities especially for youth.

## **2. Literature Review**

It has been learned from the existing literatures that there are substantial number of factors which determine the level of labour force participation in general and this ranges from individual factors to household factors and also social factors to economic factors. For instance, the social factor like gender plays very important role in determining the labour force participation and it has been observed that women are more into unpaid self-employment than their counterparts because "the women have lower propensity to enter self-employment than men, which may be

explained by higher risk aversion of females, different sectoral preferences or the theory of discrimination” (Simoes et al., 2016). The individual factor like age does play a great role too. There has been an inverse U-shaped relationship between the individual’s age and level of participation especially into self-employment that particular individual has to offer into the labour market and this same phenomenon has been argued in the studies by Simoes et al, (2016) and Ondrej (2018). This nature of relationship between the age and the participation into labour force is attributed to the lower level of mental and physical soundness as a person age (Simoes, et al., 2016 & Ondrej, 2018). The individual factor like education does play a crucial in ascertaining the level or years of experience because there is a positive correlation between the two (Ondrej, 2018). Surprisingly, an individual factor like behaviour also plays an important part. According to Verheul, et al. (2006), the women they themselves prefer less to enter into self-employment. The economic factor like access to credit facilities also an important determinant as per (Menon, 2011). “Results indicate that credit access encourages women’s self-employment as won-account workers and employers, while it discourages men’s self-employment as unpaid-family workers” (Menon, 2011). Even economic factor like land ownership and land possession plays a pivotal role and this a key determinant for the self-employment because the land can be used as collateral for the credits as per Menon (2011) and Tamvada (2010). The size of the land holdings also determines the participation in to self-employment especially in to the agriculture field. The higher the size then higher the chances to enter the self-employment in agriculture and vice-versa. Because, “individuals with small land holdings are more likely to transition into self-employment in non-agriculture” (Tamvada, 2010). It has been observed that a substantial section of the total rural workforce is engaged in non-farm sector especially women (Yangzom, 2013). So, the question arises is it worth or is it just a survival tactics? Because, according to Merfeld (2019), “Rural non-farm self-employment is a sector of last resort for many individuals”. The social factor like Scheduled Tribes and Scheduled Castes are also two important determinants. According to Menon, (2011), the STs are more into self-employment as an employer and SCs are more into regular wage employment meaning thereby SCs are less into self-employment as an employer or entrepreneur. Because, being a backward class individual decreases the chance to enter the self-employment in both the sectors i.e., agricultural as well as non-agricultural sector (Tamvada, 2010). It has been reviewed that the gender disparity or gap in the labour force participation has been increasing and this is mainly attributes to the declining labour force participation from women. According to Kumari & Pandey (2012), the gap between the males and females in the labour force participation has been increased in recent years and this is due to declining workforce participation from females’ side. However, on the relieving note, Dubey, et al. (2017) witnessed that a long-term slow decline in the labour force participation from rural females in regular wage employment and self-employment especially from the section of Dalit and Adivasi females. The ILO’s newsroom (2013) quotes “More women in India of

working age are enrolling in secondary school but that is only one reason why the number of women who are either working or looking for job is decreasing". Though, it has been observed abundant of literatures on labour force and self-employment but a limited literature on the topics in the study area. Moreover, a limited study on the determinants of the paid and unpaid workforce in self-employment. Therefore, the motivation of the study is to fulfil the gaps by knowing the gender differences in the workforce in the self-employment especially from paid & unpaid workforce perspectives.

### **3. Research Hypotheses**

The study tries to test the following hypotheses about the gender differences in Labour force, Self-Employment, Paid and Unpaid family workforce.

**H<sub>1</sub>:** There is a significant association between genders and self-employment workforce

**H<sub>2</sub>:** There is a significant difference of genders in the Paid workforce

**H<sub>3</sub>:** The genders play a significant role in determining the Unpaid and Paid workforce in the self-employment

### **4. Research Objectives**

The study has the following objectives:

1. To study the extent of the genders difference in the self-employment workforce
2. To examine the association between the genders and paid and unpaid workforce
3. To determine the factors leading to gender disparity in the Unpaid workforce in the Self-Employment

### **5. Data and Research Methodology**

The paper is based on the conclusive research design. The nature of data is a cross sectional and collected from 705 individuals (i.e., in the labour force) through a scheduled questionnaire. The sampling design adopted was simple random sampling method.

Statistical tools and techniques used like frequency, percentage, mean, correlation and regression. The percentage and mean were used mainly to reflect the ratio, average and shares whereas, Pearson's correlation test has been used mainly to study the association between the variables. At the same time, the One-way ANOVA test has been used to study the association

between the variables amongst numerous groups. Finally, the Logistic regression has been adopted to identify the determinants of the independent variables.

**6. Results and Discussion**

**6.1 Gender Differences in Paid and Unpaid Workforce:** The Table 1 depicts that the females have a smaller share than males into the paid self-employment irrespective of both the sectors. Among males, the rural males have higher share i.e., 68.0 percent than urban males (32.0 percent) and even rural females (62.0 percent) have higher share than urban females (37.5 percent). Thus, this show how severe is the case of gender gap in the paid self-employment i.e., as an Own Account Worker and Employers. Majority of them engaged in the self-employment in non-agriculture sector as quoted by (Yangzom, 2013).

**Table1: Distribution of the Paid Workforce among Genders across Sectors**

		Genders		Total
		Male	Female	
Sector	Rural	68 (68.0 %)	10 (62.5 %)	78 (67.24 %)
	Urban	32 (32.0 %)	6 (37.5 %)	38 (32.75 %)
	Total	100 (100.0 %)	16 (100.0 %)	116 (100.0 %)

*Source: Author's Own Computations*

The gender wise share in the paid workforce shows that males have higher share i.e., 86.20 percent and females have lesser share i.e., 13.80 percent. At the same time, rural sector has higher share in the total Paid self-employment i.e., 67.0 percent and urban sector has a lesser share i.e., 33.0 percent. Hence, it is indicated that rural sector has higher number of persons working as Own account workers and Employers than the urban sector. In terms of gender, a greater number of males are there in the district as Own-Account Worker or Employers. Whereas, it has been witnessed that females' share in to the Unpaid family workforce is much higher than males and it represents almost 3/4<sup>th</sup> of the total unpaid family workforce. This might be attributed to so many factors like lack of credit facilities, family pressure, etc.

**6.2 Level of Associations :Correlation Test:** Accordingly, the association between the genders and the labour force participation in Leh has been studied statistically with the help Pearson's correlation test and it has found that the association is statistically significant at 0.01 level of significance. The **Table 2** will show the results. This shows that the relationship between the variables gender and labour force participation is statistically positive. These two variables move

is the same direction. However, the strength of the relationship is not strong because the correlation coefficient value is .261. It is concluded that gender and labour force participation is mildly correlated.

Similarly, the correlation test has been run between the labour force participation and other variables like education, age and the results are presented in the same table. The result reveals that labour force participation is again positively correlated with the variable education and the association is statistically significant at 0.01 level of significance. Even the education seems to be mildly correlated with the labour force participation as the coefficient value is .303.

**Table 2: Results of the Correlation Test on Labour Force Participation and Various Variables**

		Gender	Labour Force Participation
Gender	Pearson Correlation Sig (2-tailed)	1	.261** .000
Labour Force Participation	Pearson Correlation Sig (2-tailed)	.261** .000	1
		Age	Labour Force Participation
Age	Pearson Correlation Sig (2-tailed)	1	-.464** .000
Labour Force Participation	Pearson Correlation Sig (2-tailed)	-.464** .000	1
		Education	Labour Force Participation
Education	Pearson Correlation Sig (2-tailed)	1	.303** .000
Labour Force Participation	Pearson Correlation Sig (2-tailed)	.303** .000	1

*Note: \*\* Correlation is significant at the 0.01 level (2-tailed)*

*Source: Author's Own Computations*

relationship is statistically significant at 0.01 level. The correlation between these two variables seems to be stronger than the other variables as the coefficient value is .0464. This shows that age has a negative impact on the labour force participation. This can be interpreted that as people grow older, their participation into any economic activity tend to reduce.

**Table 3: Results of the Correlation Test on Paid Self-Employment and Various Variables**

		Sector	Paid Self-Employment
Sector	Pearson Correlation Sig (2-tailed)	1	.216* .020
Paid Self-Employment	Pearson Correlation Sig (2-tailed)	.216* .020	1
		Education	Paid Self-Employment
Education	Pearson Correlation Sig (2- tailed)	1	.203* .030
Paid Self-Employment	Pearson Correlation Sig (2-tailed)	.203* .030	1

Note: \* Correlation is Significant at the 0.05 level (2-tailed);

Source: Author's Own Computations

The **Table 3** reveals the result of correlation test on the self-employment with other variables like education and sector. The relationships between them are statistically significant at .05 level of significance and the nature of relationship they shared is positive. However, they are mildly correlated as their coefficient values are lower than .05. These coefficients depict that sector and education has a direct association with the self-employment. In other words, these variables move in the same direction.

**Table 4: Results of the Correlation Test on Gender Based Head and Various Variables**

		Head Household	Age
Head Household	Pearson Correlation Sig (2-tailed)	1	.118* .041
	Pearson Correlation Sig (2-tailed)	.118* .041	1
Head Household	Pearson Correlation Sig (2-tailed)	1	-.164** .005
Education	Pearson Correlation Sig (2-tailed)	-.164** .005	1

Notes: \*\* Correlation is Significant at the 0.01 level (2-tailed). \*Correlation is Significant at the 0.05 level (2-tailed)

Source: Author's Own Computations

The **Table 4** shows the results of the correlation test and it has been found that head of the household is positively correlated with the variable age and the relationship is statistically significant at .05 level of significance. The degree of the relationship is low as the coefficient value is .118. However, the correlation between the head of the household with the variable

education is negative and it is highly significant. The association between these two is significant at .01 level of significance. Though the degree is quite low i.e., .164.

**6.3 Logistic Regression Model:** The binary logistic regression has been run separately for three times in the study and this was done mainly to identify the exploratory or independent variables separately for three dependent or explained variables namely Labour force participation, Paid Self-employment and Unpaid-Family worker. The independent variables were consisted of both dummy as well as categorical variable and the dummy variables were Block (1=Leh Block, 0=Otherwise), Religion (1=Buddhism, 0=Otherwise), Social group (1=ST, 0 =Otherwise), Sector (1=Rural, 0=Otherwise), Education (1=Illiterate, 0=Otherwise), Gender (1=Female, 0=Otherwise) and Type of Family (1=Joint, 0=Otherwise) and the categorical variable include Age. So, this set of independent variables remained same in all the logistic regression analysis.

Accordingly, the **Table 5** presents the results of the logistic regression on the Labour force participation. Under the analysis, the binary dependent variable values were 0 and 1, the value 1 being engaged in Labour force participation and 0 being not engaged in the same. Thus, it has been revealed from the table that Gender, Age, Religion and Education are the determinants of the labour force participation and they are statistically significant. Moreover, these identified determinants except for Religion are highly significant in explaining the change in the Labour force participation. Therefore, it is interpreted that, the gender, age and education have an impact on the dependent variable i.e., Labour force participation in Leh. Furthermore, it has been witnessed that being a female will reduce the probability to be engaged in Labour force participation and this is mainly due to the fact that involvement of females into the activities like attended the domestic duties and engaged in free collection in the household chores. Hence, this inferential analysis validates the first alternative hypothesis i.e., *H3: The role of genders in determining the self-employment workforce is significant.*

**Table5: Results of Logistic regression (Self-employment Workforce) and Variables in the Equation**

	B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
							Lower	Upper
SECTOR	-.341	.191	3.177	1	.075	.711	.489	1.035
BLOCK	-.151	.181	.699	1	.403	.860	.604	1.225
GENDER	-1.001	.115	75.192	1	.000	.368	.293	.461
AGE	.025	.003	66.894	1	.000	1.025	1.019	1.032



RELIGION	.341	.152	5.008	1	.025	1.406	1.043	1.895
TYPEFAMILY	.028	.102	.072	1	.788	1.028	.841	1.256
EDUCATION (1)	-1.738	.121	205.814	1	.000	.176	.139	.223
Constant	-.449	.278	2.610	1	.106	.638		

Source: Author's Own Computations

Similarly, the **Table 5** presents the results of binary logistic regression to identify the explanatory variables for the dependent variable Self-Employment. The binary values for the dependent variable are 1 and 0, the value 1 means being engaged into paid self-employment and 0 means not being engaged in to paid self-employment. On the other hands, the independent variables are the same as that of previous case i.e., labour force participation. The results demonstrate two determinants (Gender and Age) and they are statistically highly significant. Again, here in terms of Self-Employment, the Gender does determine it. Therefore, it is interpreted that being a female decreases the chance to be self-employed and on the other hand, being a male increases the chance to be self-employed. The main reason for this could be involvement of higher proportion of females into unpaid-family workforce and also into job seeking category. Hence, this inferential does support the second alternative hypothesis  $H_2$ : *There is a significant role of genders in determining the Paid Self-employment.*

**Table6: Results of Logistic Regression (Paid Self-Employment) and Variables in the Equation**

	B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
							Lower	Upper
SECTOR	-.436	.383	1.293	1	.256	.647	.305	1.371
BLOCK	-.515	.363	2.018	1	.155	.597	.293	1.216
GENDER	-2.042	.284	51.576	1	.000	.130	.074	.227
AGE	.030	.005	35.929	1	.000	1.031	1.021	1.041
RELIGION	-.117	.259	.206	1	.650	.889	.536	1.476
TYPEFAMILY	-.318	.203	2.444	1	.118	.728	.488	1.084
EDUCATION (1)	.160	.229	.488	1	.485	1.173	.749	1.836
Constant	-2.250	.517	18.969	1	.000	.105		

Source: Author's Own Computations

The **Table 7** shows the results of binary logistic regression to identify the determinants of the dependent variable- Unpaid Family Worker. The values of the binary dependent variable are 1 and 0, the value 1 being engaged into Unpaid-family worker and 0 not being engaged. Whereas, the independent variables were the same list of variables and from the result,

**Table7: Results of Logistic Regression (Unpaid Family Worker) and Variables in the Equation**

	B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I. for EXP(B)	
							Lower	Upper
SECTOR	-2.368	1.024	5.346	1	.021	.094	.013	.697
BLOCK	-1.866	1.022	3.334	1	.068	.155	.021	1.147
GENDER	.621	.285	4.730	1	.030	1.860	1.063	3.255
AGE	.013	.007	3.353	1	.067	1.013	.999	1.027
RELIGION	-.040	.351	.013	1	.910	.961	.483	1.911
TYPEFAMILY	.118	.239	.241	1	.623	1.125	.704	1.798
EDUCATION (1)	-.204	.287	.508	1	.476	.815	.465	1.430
Constant	-1.826	1.141	2.563	1	.109	.161		

Source: Author's Own Computations

it has been witnessed that Gender and Sector are the statistically significant determinants of the dependent variable Unpaid Family worker. So, this means that if an individual is happening to be a female and being residing in urban area, then chances of that individual being an Unpaid family worker increases. Thus, this validates the third alternative hypothesis  $H_3$ : *The role of genders in determine the Unpaid-family worker significant.*

### 7. Key Findings and Policy Implications

The key findings of the study and accordingly the policy implications are as follows:

1. In overall labour force participation, the males have higher share than females. However, sector-wise the rural areas have higher share than urban areas in the total labour force participation. Accordingly, the rural males have higher share than urban males and urban females have higher share than rural females. The rural females have higher proportion of them as job seekers than the urban females. Hence, it has been suggested to the government, that firstly, the policy makers must consider providing more employment opportunities

especially targeting rural sector as well as females. Education being one of the important determinants of the labour force participation as witnessed in the study, secondly the policy makers must focus to strengthen the education sector by ensuring the improvement in the education quality in the district. thus, this way people can become competent enough to compete at the national level competition.

2. In the paid self-employment, the males have higher share than females and rural sector has higher share than urban sector. So, the shares of males are 6 times higher than females irrespective of sectors and the difference is very huge in both the sectors. However, by looking through the share in terms of number of persons, the rural sector has higher number of persons engaging in the paid self-employment. Hence, this reflects that rural sector has a potential in the self-employment-entrepreneurial perspective. Therefore, it has been suggested to the policy makers firstly, to introduce more often Skill training-cum-enhancing programme especially targeting adult females in the age group of 29-40 years in rural areas. Secondly, the policy maker must ensure credit facilities to these target groups to encourage them to go into entrepreneurship. Thirdly, the government must provide incentives to those who start self-employment-entrepreneurship in the form of reimbursement of the input costs, subsidies on inputs, free entrepreneurship development programme, etc.
3. In unpaid-family worker, the females have higher share than males. Thus, this shows the wastage of human resources. Therefore, the government must focus on building the district's economy by utilising these females unpaid-family worker in the system and the government can achieve this by providing employment opportunities, skill enhancing programmes, entrepreneurship development programmes, providing loans, etc.

## **References**

Dubey, A. Olsen, W. & Sen, K. (2017). *The Decline in the Labour Force Participation of Rural Women in India: Taking a Long Run View*. The Indian Journal of Labour Economics, 60, 589-612

Dvoulety, O. (2018). *Determinants of Self-employment with and without Employees: Empirical Findings from Europe*, International Review of Entrepreneurship, 16(3), 405-426

Kumari, R. & Pandey, A. (2012). *Women's Work Participation in Labour Market in Contemporary India*. Journal of Community Positive Practices, 1, 18-35

International Labour Organisation, (2013). *Why is Women's Labour Force Participation is Dropping?*

Menon, N. & Rodgers, Y.V. M. (2011). *How Access to Credit Affects Self- Employment: Differences by Gender During India's Rural Banking Reforms*. The Journal of Development Studies, 47 (1), 48-69 DOI:10.1080/00220381003706486

Merfeld, J.D. (2019). *Moving Up or Just Surviving? Non-Farm Self-Employment in India*. American Journal of Agricultural Economics, 102(1), 32-53

Simoes, N., Crespo, N., & Moreira, S.B. (2016). *Individual Determinants of Self-Employment Entry: What do we really know?* Journal of Economic Surveys, 30 (4), 783-806

Tamvada, J.P. (2010). *The Dynamics of Self Employment in a Developing Country: Evidence from India*. Munich Personal RePEc Archive <https://mpra.ub.uni-muenchen.de/20041/>

Verheul, I., Thurik, R., & Grilo, I. (2006). *Determinants of Self-Employment Preference and Realization of Women and Men in Europe and the United States*. Scientific Analysis of Entrepreneurship and SMEs, EIM Business & Policy Research

Yangzom, T. (2013). *Occupational Distribution of the Rural Workforce of Leh District- Preliminary Findings*. Ladakh Studies, 29, 13-18

**Websites accessed:**

[www.Internationallabourorganisation.com](http://www.Internationallabourorganisation.com)

[www.UnitedNations.com](http://www.UnitedNations.com)

[www.Worldmeters.com](http://www.Worldmeters.com)