

## WOMEN DECISION MAKING POWER AND ENTREPRENEURSHIP: EFFECT ON CHILDREN'S WELLBEING IN PAKISTAN

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### ABSTRACT

*Globally, growing economic needs, increasing dependency ratio, poverty, and unemployment with gender differences enforcing females to participate in economic activities. Female entrepreneurs are recognized as an economic driver for the growth as well economy generating income for their own, families and creating employment for other females. However being a woman, that usually becomes hard to manage work-life balance and hence they shift the workload on their children. This study aims to explore the links among female entrepreneurs (own household enterprises) on child education and employment. The Probit model is used to estimate the model for that purpose cross-sectional data of HIES (Household Integrated Economic Survey) is employed for the period 2018-2019. The finding of the results reveals that female having enterprises positively influence girls' employment while the effect on education it remained insignificant. Meanwhile, empowerment influences education with a negative sign that shows the presence of daughters in the labor force. While for boys only empowerment shows significant results.*

**Keywords:** Entrepreneurship, Employment, Time allocation, Children, Well-being

Jell Classification: L26, J23, J29, J13, I30

### 1. INTRODUCTION

Entrepreneurial activity embedded in families implies that family characteristics may have a significant influence on firms and families as well [Aldrich and Cliff, (2003)]. Hence, understanding a firm-family interaction is important to explore knowledge about business development, as well as the well-being of enterprising families and households, as discussed by Alsos et al. (2014). Most research studies focus on the financial knowledge of females, which has positive links with better accumulation of wealth, planning, and controlling resources. Studies also identify that Mother's independence provides a further social return to the family. However, Parents who have limited financial resources are most likely to put their resources toward boys' education (considering them as bread earners) rather than girls. Women's self-employment/entrepreneurship affects the well-being of their families especially children [Zellweger, (2011)].

In developing countries, the informal sector provides shelter to females by helping them to run their businesses and perform entrepreneurial activities. Females who are illiterate but have experience or skills provide financial protection to their families through economic participation. To manage the work-life balance, the dual responsibility of females in terms of either the business or family liability, not only build pressure on herself but also lead to neglecting her tasks at both ends. Not understanding all these circumstances, females shift some sort of unintentional work burden towards children, especially on girls.

Literature shows that an increase in female labor force participation increases the sharing of the household task between husbands and children. The study by Coltrane, (2000) found that females on average work two to three hours more than male workers. However, when males start a business the motive is to generate profit while for females priority is family wellbeing, especially children. Most females keep their businesses small and rely upon their families; this raises the workload on children. Children sharing her mother's workload enforces them to forgo their education. Girls are more affected as compared to boys as they are supposed to care for their younger siblings.

As financial needs usually enforce females to contribute to a household through labor-force participation but still all over the world, this participation rate stands at 48% while for males it stands at 75%. A huge difference exists between the two females who are more under-utilized when compared to

males, as reported by the World Employment and Social Outlook Trend, (2019). Globally, the share of own-account workers (in low and lower-middle-income countries) reached around 50% while for upper-middle-income countries was found around 29%. In high-income countries, this share stands at 9%, as stated by the ILO, (2018).

In Pakistan, female labor-force participation remained at a very low level, due to factors like; lack of education, information about market-unawareness of market trends, perception regarding the failure of business and running enterprise, lack of experience, financial constraints, and less favorable support from the family. All of these account for crucial problems for females to run the business. The existence of unfavorable conditions in the labor market, especially for low-paid jobs, diverts the attention of females toward their own businesses. However, for the female entrepreneur, it is very difficult to balance household, responsibilities and maintain justice for their business. In literature, it has always remained debatable as to how female entrepreneurs can manage smoothly both ends [see Jennings and Brush, (2013) for details].

In addition to the above, social, cultural and ritual boundaries enforce females to adopt self-employment so that they are at ease to accomplish their household responsibility. In Pakistan, most female enterprises are related to manufacturing and service sectors where females make independent efforts in specific areas like beautification, homemade stitching, food preparation, hand-made jewelry, and so on. Child participation in household enterprises is very common. The impact of women's entrepreneurship on child education though expected to be positive while negative on child employment, however in reality, children share the burden of their parent's work especially if the child is a girl. Further, the role of elder children (especially girls) in helping mothers is not limited, as they have to take care of their young siblings. Given the above discussion, the present study focuses on evaluating the impact of female empowerment and entrepreneurship on the well-being of households especially focusing on children. It specifically, explores the influence of the two on Child Education and Employment. The specific objectives are;

1. To assess (by gender) the impact of mothers' empowerment and entrepreneurial activity on children's education
2. To explore (by gender) the impact of mothers' empowerment and entrepreneurship on children's employment

The study is based on the argument that; micro, small and medium enterprises generate employment for females /mothers. Female entrepreneurship is beneficial not only for herself (enhancing empowerment) but also generates further employment for others - social and economic outcomes. Female entrepreneurship will result in an economic outcome such as the creation of employment, while social outcomes such as autonomy/empowerment and child well-being through evidence predict an increase in child employment and a decline in school enrollment as well.

## **2. REVIEW OF LITERATURE**

Deteriorating socio-economic conditions may lead to children's absenteeism from schools and may increase their involvement in economic activities. Khan et al. (2011) focused on the child-care situation in Pakistan and explored the gender differences at the household level. As seen in the household enterprises, girls' contribution accounts for more as compared to boys. It was observed that girls' involvement in homecare activities is 9.6% more as compared to boys. Meanwhile, employment status, household income, assets, and per capita income shows a negative impact on home-care child work. Increasing household size, number of children, and birth order of the child affect positively child-care work.

Alsos et al. (2016) observed the working condition of female entrepreneurs in Norwegian society and the interlink with family life. The findings of the study show that females bear additional business risks and costs due to social and cultural restrictions that create hurdles for their business. Finding also reveals excessive workload for females and long working hours as compared to male workers. Child participation is evident in household activities such as looking after siblings, engagement in cooking and other household works. The majority of children neither reported attached to work nor go to school [Maitra (2002)]. The study by Maitra (2002) covered children's working conditions in three countries, i.e., Pakistan, Peru, and Ghana, and have categorized the work involvement. The multinomial Logit Model was applied for the empirical analysis. The finding reflects that the resistance to poverty affects Pakistani children, as well as

Ghana's children, - children are enforced to do work. The study shows that more girls are found in home-care activities while boys are found working outside the home in Pakistan, as compared to Peru and Ghana. Better decision-making power by sizable work participation of women affects child education significantly (Farzana, 2012). The land and assets holding induce positive strength to women in the society and give empowerment. Farzana, (2012) explores, the generation of employment opportunities for poor women in the labor market and its impact on child education. The participation of father, mother, and son in the labor market causes a positive income effect and have a significant effect on the education of the younger children.

Javed, (2012) focused on the trend and future development of entrepreneurship in Pakistan and identified the linkages between women's development and their well-being. Javed (2012) highlighted the need for government initiatives for the capacity building of women entrepreneurs. The finding shows the status of women entrepreneurs varied by status, class, and region. Women entrepreneurs uplift their economic condition by their participation in the labor force. The study also enforces the importance of SMEDA (Small-medium business enterprises) in providing a capacity-building program for women entrepreneurs.

Reggio, (2010) explored the objectives of bargaining power, which affects child outcomes. The finding shows that on average, 12% of children, work for about 54 hours in a week, while 45% spent, 31 hours a week. The growing age of children, like 10 years increases the work participation of a child to 33%. Girls' participation in home-care activities accounted for nearly 59% while 36% of boys were found in paid work in the Mexican household sample. The result also emphasizes that an increase in mothers' bargaining power reduces child working hours significantly; which especially goes in favor of girls. Xiaodong et al. (2015) examined the persistent gender gap with a positive correlation between mothers' labor-force participation and children's education in the USA and Norway. Goldberg et.al, (2008) explored the relationship between a mother's employment and a child's academic achievement. The empirical assessment showed significant results among full-time and part-time employment of mothers on child achievement. Almani, (2012) highlighted the social-emotional and cognitive development that impacts working in Pakistan. The study concluded that 98% of teachers, 88% of mothers, and 77% of students go in favor of a mother's job that does not affect a child's cognitive development.

Faridi (2011), focused on the Bahawalpur district of Pakistan and highlighted factors that cause women to become self-employed. The study discussed the unemployment issue; women need to enter the labor-force market to overcome financial issues. Overall findings reflected that age and education, provide positive and significant results. Household size, number of children, marital status, and location, decline the labor force participation of women. Husband-wage and unitary family setup also discourage women's participation in the labor force.

Roomi et al. (2012) examined the responsibilities of women entrepreneurs in Pakistan. Generally, women have a dual role in combining work and household activities. The results found that the majority of females in the community have an opinion to select the desired work. Work-life balance provides females with a sense of responsibility and confidence to overcome problems. Roushdy, (2007) focused on females' collective bargaining model of decision-making power. The study aimed to explore the link between household decisions in a family and their impact on child welfare. The findings of the analysis showed that it is a fact that most women spend their cash resources positively on their children's health and education if they have decision-making power.

Al-Shami et al. (2018) found that microfinance provides services and facilities for those women who want to start their businesses but facing financial hurdles to carry on in the proper way. The author tries to explore the facts of microcredit on Malaysian women and how they influence the decision-making power with welfare. The study use cross-sectional data for a sample of 474 clients. The finding shows the positive impact on women's empowerment, by the rise in income as well as a better standard of living in terms of well-being not only for themselves but also for their families. Wei et al. (2021) investigate the role of women's empowerment to reduce household poverty especially its effect on children and the overall well-being of families concerning education, health, and household expenditure. Used primary data to cover the married women have a sample size of 914 respondents. OLS and Logit model techniques apply for the estimation purpose. Results reveal that women's education; assets and income increase the power of

decision significantly and cause to reduce income poverty. Percentage-wise decision-making of women for the following heads show (decision jointly or herself shows (80%), on household expenditure (62%) and health-related decisions (43%) expressed by the respondents. Further, it is also realized that women, who have the power of income, have more hold on economic existence in society with high autonomy.

In sum, most studies comprise socio-economic factors that impact family and child well-being if females are running their enterprises. It has been observed that family support boosts satisfaction with work, while social and cultural norms restrict females to do business. Self-reliance, confidence, and empowerment come through education and generating income. Labor force participation provides the solution for females to upgrade their status. Preference for a son compared to a daughter could not be denied. Most children in middle and lower-middle-income families, indirectly bear the burden of work, especially girls which further influences their education as compared to boys. Literature also highlighted that females bear additional business risks and costs due to social and cultural restrictions that create hurdles in continuing their business. Long working hours discourage her to take part in the labor force. However, work-life balance provides females a sense of responsibility and confidence to overcome problems. Literature lack assessment of the impact of female entrepreneurship on child well-being given female empowerment

### 3. METHODOLOGY / DATA AND ESTIMATION TECHNIQUE;

The study aims to find the impact of Female owned household enterprises and empowerment on children's education and employment status in Pakistan. The impact is explored after controlling for the endogeneity in the model. Two-stage instrumental variable regression is employed to estimate the relationship. The model of the study, specifically explains the impact of empowerment and household enterprise owned and operated by the female on the proportion of girls and boys employed and enrolled shown by equation 3.1. Here, *outcome<sub>ig</sub>* is a dependent variable representing (outcome variable) ratio of the number of boys and girls employed and enrolled by the number of boys and girls recorded under a mother. Where *i* shows the mother's understudy and *g* indicates the gender of the child. Explanatory variables included in the model are *H\_ENTRPI* (a household-owned enterprise equals 1 otherwise 0), *EMPOWR<sub>i</sub>* the female empowerment index, the mother's personal characteristics *MPERCH<sub>i</sub>* (representing age, age square exploring- non-linearity, empowerment index, and years of education). Husband's or father's characteristics *FHUSB<sub>i</sub>* (consist of husband's age, education, and wage); while household characteristics, *HOUS<sub>i</sub>* comprises of availability of gas, electricity, water, and toilet facility and congestion in the house. Cultural and social norms *POV, REG* (by province and region) are reflected by dummy variables.

Hence, concerning gender two regressions for the employed/enrolled proportion of children are run separately.

$$Outcome_{ig} = \beta_0 + \beta_1 H\_ENTRPI_i + \beta_2 EMPOWR_i + \beta_3 \sum_{j=1}^4 MPERCH_i + \beta_4 \sum_{i=1}^3 FHUSB_i + \beta_5 \sum_{s=1}^3 HOUS_i + \beta_6 POV + \beta_7 REG + \varepsilon_i \dots\dots\dots (3.1)$$

The study hypothesized that boys' and girls' employed and enrolled proportion may be a positive and negative function of female-owned household enterprises - especially for girls. In Pakistan, mostly the informal sector consists of home-based or self-employed workers where most children help their mothers in home-based work. The mothers as an owner of the enterprises would first prefer that their children should be engaged in their business to run it smoothly and earn more profit. Thus, this means that ownership of household enterprises will affect children's employment positively. However, with the increase in profitability and income, the impact can turn negative on children's employment and would facilitate enrollment (positive). Secondly, empowerment provides the power to females to take decisions. Mothers are often considered more sensitive to their child's education and employment decisions. Their higher decision-making power is hypothesized to increase school enrollment while reducing the employment probability of their children.

Further rising age with relevant experience and education will increase the economic participation of mothers, husband characteristic the *HUSB<sub>i</sub>* is also assumed to have a significant impact. Here, *HOUS<sub>i</sub>* represents the household characteristics that are basic needs. Lack of proper gas connection, lack of water, unavailability of electricity, and lack of sanitation problems increase the probability of boys' and girls'

employment, reducing the probability of getting enrolled. As far as provincial and regional dummies are concerned to study hypothesized, that effect could have been negative or positive. Given that each province and region in Pakistan is diversified in prevailing cultural and social norms, which influence the education and employment decision of children differently by considering their gender

### 3.1 Estimation Technique - Instrumental Variable (2SLS)

As stated earlier, this part of the study sheds light on how female-owned household enterprises and empowerment impact on child's education and employment. For that, purpose the Instrumental variable Two-Stage Least squares (2SLS) technique is employed on the National level data of PSLM/HIES (Pakistan Social Living Standard Measurement/Household Integrated Economic Survey). As, PSLM is conducted at the National level by the PBS (Pakistan Bureau of Statistics), which is a prime official agency that has the responsibility of providing timely and reliable statistical information such as data collection, compilation, and dissemination for the policymakers, researchers, and other academicians. PBS publishes the information in the form of different reports through primary (at the initial level) and secondary (published in different years) survey data. Overall, data consist of 53% male and 49.9% females, of these 398 females are running enterprises – i.e. of the total females 56,243, age 14 and above, 0.71% are running home-based enterprises for the year (2018-2019), [for the construction of variables see Annex-1].

Both female empowerment and entrepreneurial activity are considered here as endogenous with child-related outcomes. Women empowerment is endogenous in the child employment model given its causal relationship. According to Fatima (2013), child employment means an increase in income in the hand of parents having high bargaining power, hence if mothers are empowered they may keep the earnings of the child in their hands. Economic resources directed towards the hand of mothers instead of declining child employment may further increase their employment, which ultimately leads to a decline in their enrollment. However, the relationship could be the other way around as well, i.e. increase in empowerment (coming from enhanced income) will reduce the earning burden from children leading to an increase in their enrollment.

Further to this high number of children in the house helping mothers in their enterprise may motivate mothers to expand their business, as free-of-cost labor is available at home. Again the impact could be reversed as well increase in entrepreneurial activity will bring economic prosperity to the home this motivates parents, especially mothers' to reduce the burden of work from the shoulder of their children and enhance their enrollment. Hence, in both cases, the presence of a causal relationship motivated the study to explore the endogenous nature of the variable, see the equation;

$$Y_i = \alpha_o + \alpha_1 X_i + \mu_i \quad (3.1.1)$$

Instrumental variables divide  $\mu_i$  into two parts, the part that correlates with  $X_i$  and the part that is uncorrelated -  $\mu_i$ .

To remove the problem of endogeneity – correlated part from  $\mu_i$  it employed instrumental variable  $Z_i$  that are uncorrelated with the error term. The approach allows the instrument variable to correlate with  $X_i$ . For the validation of instruments, certain conditions IV must follow:

1. Instrument correlates with  $X_i$  means - covariance  $(Z_i, X_i) \neq 0$
2. Instrument should not correlate with  $\mu_i$  means – covariance  $(Z_i, \mu_i) = 0$

In the First step  $X_i$  is regressed on exogenous variables including  $Z_i$  (instrumental variable)

$$X_i = Y_o + Y_1 Z_i + v_i \quad (3.1.2)$$

As the  $Z_i$  is uncorrelated to  $\mu_i$  so the right-hand part of the equation that is  $Y_o + Y_1Z_i$  also uncorrelated to the  $\mu_i$ .

Predicting the value of  $X_i$ , from the equation that is  $\hat{X}_i$ ;

$$\hat{X}_i = \hat{Y}_o + \hat{Y}_1Z_i \quad (3.1.3)$$

So the whole equation shows systematically as

- In the first stage, run the regression  $X_i$ , on Instrument  $Z_i$  from where we obtained  $\hat{X}_i$  predicted value,
- In the Second stage put this predicted value  $\hat{X}_i$  and run on  $Y_i$

Hence, the Instrumental variable Two-Step Least Square (2SLS) technique yields consistent estimates of  $\hat{\alpha}_1$

This study has predicted the endogenous variables (female own household enterprises and empowerment) using five instruments (i) Ratio Entrepreneur income to Household income, (ii) Ratio of Female wage to Male wage, (iii) Sex ratio, (iv) Education difference, (v) Age difference.

#### 4. EMPIRICAL RESULTS

To estimate the effect of female-owned enterprises and empowerment on children's education and employment, the 2SLS approach is applied. This study explores girls' and boys' employment and education status separately. The estimation results are as follows;

##### Girls' Employment and Education

Mostly in Pakistan, the informal sector consists of home-based or self-employed workers where children often help their mothers. However, a mother's employment is hypothesized to have a negative effect on child employment as more economically active females would not prefer their children to be engaged in home-care and employment activities, even if they are not going to school. In some cases, parents prefer their children to earn and share the burden of the family. This argument is also supported by the study of Khan, (2011), who claims that educated and working women have rejected the engagement of their children in work. However, the fact is that females in self-employment or females' engagement in household enterprises shifts, and the work burden of mothers is on the shoulders of girls as compared to boys. Further, as far as empowerment is concerned, empowerment provides support to females for deciding on education, employment, health, or any other concerned feature relating to children.

The results show that females operating household enterprises, positively affect the labor-force participation of girls, i.e., having mothers involved in running household enterprises increase the chances of their daughter's participation in the labor force, significantly. One percent change in the ownership of female household enterprises causes an increase in girls' (daughter) labor-force participation by 2.1%. Meanwhile, the impact of empowerment remained insignificant to define the labor-force participation of daughters. The empowerment status of the mothers is, controlling their participation in the household enterprise, it is not effective in explaining their daughters' labor market participation, this may be because of the financial constraint faced by the household that forced children to work – especially girls as said above the burden of mothers' work is usually transfer to daughters.

Next, the positive and significant effect of girls' age on employment and education shows that not only probability of a girl's engagement in economic activity increase with age but also her chances to get enrolled in school also increase. In poor households, child-earn income for their family support, increases in age hence increasing labor-force participation. Empirical results show that a one percent change in child age will make a change in employment by 0.001%. However, the entrepreneur's mother also encourages their daughters to get an education besides helping them with work. A one percent increase in child age increases the enrollment by 0.06%. These results are also supported by the findings of Khan, (2011).

Larger family size will increase household expenditures or financial burden. Financial resources would be needed to remove imbalances – increasing the economic participation of the household members

including children as well. The result shows that the number of household earners is positively and significantly related to the labor-force participation of girls. Estimation results show that a one percent increase in household earners will increase girls' participation by 0.005%. This increase in participation reduces the education probability. The negative and significant effect of the number of earners on girls' education confirms this. Further, an increase in dependency ratio also increases the girl's labor force participation which also shows that girls enter the labor market when financial resources are needed to support the family, its effect is though insignificant in explaining the girl's education decision.

The impact of female heads on girls' labor-force participation shows a significant but negative impact. The evidence though shows that a household with female heads observes more vulnerability/poverty as compared to a household with male heads thus increasing children's participation in the labour market. However, the findings of this study contradict the evidence available. The estimation results show that a one percent increase in female-headed households will decline the probability of girls' participation by 0.001% while increasing the girl's enrollment by 0.007% female heads promote and support girls' education as compared to their economic participation.

Indicators of living standards, show significant impacts on reducing girls' labor force participation while promoting girls' education. As far as congestion is concerned, it increases both girls' participation in the labor market and their school enrollment as well. Overall, regarding the living standard study can conclude that a better living standard means lower economic participation of daughters and enhanced education. Among the provincial dummies, provinces like Punjab and Sindh show a positive and significant effect on girls' employment while the culture of Punjab shows promoting girls' education. On the other hand, Balochistan province shows a significant negative effect on education. The significant effect of urban areas is only evident in girls' education shown in Table.1

**Table-1: Female Enterprises and Empowerment - Impact on Girls' Employment and Education**

Dependent Variable/ Independent Variable	Girls' Employment		Girls' Education	
	Coefficient	t-stats	Coefficient	t-stats
Female owned and operate Household Enterprise	2.140	2.40**	4.70	1.63***
Female Empowerment	-0.310	-1.55	-.254	-2.15**
Child Age	0.001	2.88**	0.06	34.42**
<b>Household Characteristics</b>				
Household Earner	0.005	3.65**	-0.33	-6.10**
Dependency Ratio	0.003	1.70**	0.01	1.57
Female Head	-0.001	-3.00**	.007	3.17**
Gas	-0.006	-2.12**	0.15	5.44**
Electricity	0.007	1.49	0.191	7.16**
Toilet	-0.005	-2.32**	0.032	2.54**
Water availability (piped)	-0.001	-0.49	0.040	3.18**
Congestion	0.010	1.80**	0.152	4.39**
<b>Province</b>				
Punjab	0.024	2.13**	.290	4.33**
Sindh	0.011	2.78**	.004	0.24
Balochistan	-0.007	-0.97	-.217	-5.49**
<b>Region</b>				
Urban	0.004	1.30	3.12	3.12**
Constant	-0.034	-2.57	-.382	-5.34
Number of observation		8823		8823
Wald Ci2(15)		27.70		4112.9
Probability>Chi2		0.023		0.000

Note: \*, \*\* and \*\*\* represent significant at 1%, 5% and 10% level respectively

### Boys' Employment and Education

Table-2 provides estimation results for boys' employment and education decisions. The same variables are applied to the assessment of girls' employment and education models. The proportion of boys employed and enrolled is used as the dependent variable. Female decision to own and operate household enterprises that provide a significant route for boys' employment as unpaid family members thus reducing their chances of getting enrolled in school. It means that female ownership of enterprise may support child employment for boys. On average, a one percent increase in female ownership of household enterprise causes a 4% increment in boys' employment; meanwhile, its effect on boys' enrollment is insignificant.

In Pakistan, the majority of the population belongs to rural areas where basic education is far away from access, especially for females and this illiteracy enforces them to meet both ends of family needs hence their focus remains on meeting financial needs rather than enhancing education. The next variable of interest, empowerment of the mother again confirms the above-stated argument. Mothers' empowerment not only remains insignificant in affecting boys' employment but also declines boys' education significantly.

The next explanatory variable child- age, shows a positive and significant impact on both boys' education and employment. Rising-age of a child not only exposes boys to opportunities that exist in the labor market but also opens windows for education as well. On average one percent increase in age causes employment to increase by 0.004% while increasing enrollment by 0.07%.

The result further shows that the number of earners present in the household has a positive and significant effect on the labor-force participation of boys. Estimation results show that a one percent increase in the number of household earners will increase boys' economic participation by 0.012%. This increase in participation hence reduces the education probability by 0.02%. The result again confirms that children enter the labor market when needed. Further, an increase in dependency ratio not only increases the boy's labor force participation but also increases their enrollment as well. This shows that children usually enter the labor market when financial support is needed for the family as indicated in the girls' model as well. While its positive effect may explain why boy enrollment increases as the dependency ratio increases. This effect was insignificant for the girls. This may indicate that an increase in dependency ratio increases the burden on girls while for boys the situation differs. Boy's involvement in household care activity is very limited hence their enrollment is not affected shown in Table.2

**Table -1: Female Enterprises and Empowerment - Impact on Boys' Employment and Education**

Dependent Variable/ Independent Variable	Boys' Employment		Boys' Education	
	Coefficient	t-stats	Coefficient	t-stats
Female owned and operate Household Enterprise	4.07	2.33**	1.39	0.45
Female Empowerment	-.010	-0.29	-0.23	-1.85**
Child Age	.004	5.88**	0.07	38.57**
<b>Household Characteristics</b>				
Household Earner	.012	4.62**	-0.02	-4.44**
Dependency Ratio	.007	2.22**	0.01	3.02**
Female Head	-.003	-2.35**	0.005	2.05**
Gas	-.017	-2.35**	0.07	4.19**
Electricity	.0001	0.03	0.15	5.61**
Toilet	-.007	-1.75***	0.02	2.00**
Water availability (piped)	-.005	-1.05	0.008	0.75
Congestion	.015	1.09	0.128	3.61**
<b>Province</b>				
Punjab	.021	0.88	0.17	2.32**
Sindh	.024	2.40**	-0.03	-1.45
Balochistan	.011	1.04	-0.24	-5.30**
<b>Region</b>				
Urban	.013	1.98**	0.17	1.00
Constant	-.05	-2.16	-0.26	-3.37



Number of observation	9211	9211
Wald Ci2(15)	109.6	5987.8
Probability>Chi2	0.000	0.000

Note: \*, \*\* and \*\*\* represent significant at 1%, 5% and 10% level respectively

**First Stage Regression Results**

As stated in the study, the effect of female enterprise ownership and empowerment on children's employment and education is explained after controlling for endogeneity. The below section presents the first-stage regression results. The regression model discussed below is the inclusion of instruments to control the endogenous nature of empowerment and entrepreneurship with child-related outcomes. Overall the instruments included in the below two models are; sex ratio, the age difference between wife and husband, the education difference between husband and wife, the ratio of income from female-owned enterprise to household income, and the ratio of female wage to male wage in a household.

The regression result shows that the ratio of entrepreneur income to household income impacts significantly with negative signs in both cases of boys' and girls' employment status. Meanwhile, the variable, ratio of female wage to male wage coefficient for only girls' employment status affects positively with the significant sign. The sex ratio for boys and girls employment also affects significantly and positively, however, education difference and age difference variables impact both genders insignificantly. Out of the five instruments chosen here, three are relatively significant in explaining the female decision to own and operate a household enterprise i.e. sex ratio, the ratio of income from female-owned enterprise to household income, and the ratio of female wage to male wage in a household. The impact of the ratio of income from female-owned enterprises to household income is negative while the impact of the other two is positive and significant. The negative coefficient is justifiable because the ratio of income from female-owned enterprises to household income when increases imply that the female share in household income is increasing which further indicates stabilization of household financial condition as well. This in turn reduces the need for female contribution to the household income. Given the fact that female mainly enters into economic activity when financial need arise. Any improvement in household financial conditions will reduce the probability of female entrepreneurship. As far as the ratio of female wage to male wage is concerned, this variable shows women earning potential as against male members in the family, which attracts more females in the household towards entrepreneurship – highlighted here by a positive coefficient. Finally, the sex ratio represented here as the number of female members as a ratio to the number of male members in a household, showing the strength of females in the house which empowers females hence the probability of their economic participation increases explained in Table .3

For the empowerment model out of the five instruments only education difference and the ratio of female wage to male wage shows significant and positive effects. The higher the potential higher will be their contribution to household income enhancing their role in decision-making and leading to empowerment. (Basu, 2006) highlighted that when the financial contribution of females in the household increases it increases their position in the household thus enhancing their empowerment – though the relationship is bi-directional. As far as education difference is concerned, the study assumed that the higher difference would result in higher empowerment. The positive effect of the educational difference between Own (wife)-to husband's education indicates that when females are relatively more educated than their husbands they would have more control over resources leading to more empowerment are presented in Table 3;

**Table -3: Children Employment Status, Female Own Household Enterprises & Empowerment (by Gender) – First Stage Regression**

Dependent Variable: Female Household Enterprises	Girls		Boys	
	Estimated Coefficient	t-stats	Estimated Coefficients	t-stats
Child Age	.0003	2.02**	.0002	2.04**
Household Earner	.0011	2.35**	.0017	3.18**
Dependency Ratio	.0004	0.55	.0002	0.28

Female Head	-.0003	-1.67	-.001	-3.27**
Ratio Entrepreneur income to Household income	-.0001	-1.89**	-00008	-1.88**
Ratio Female wage to Male wage	.0097	2.38**	-.0008	1.12
Sex ratio	.0009	2.40**	.003	2.61**
Education difference	1.83e	0.03	.00004	0.49
Age difference	-1.82e	-0.02	-.00003	-0.27
<b>Household Characteristics</b>				
Gas	.0028	2.05**	.003	2.15**
Electricity	-.0006	-0.62	-.0002	-0.24
Toilet	.001	2.12	.0007	0.92
Water availability (pipied)	-.0002	-0.23	-.00007	-0.06
Congestion	-.003	-1.90**	-.003	-1.28
<b>Province</b>				
Punjab	-.002	-1.83**	-.004	-2.42**
Sindh	-.004	-2.57**	-.006	-3.05**
Balochistan	-.003	-2.40**	-.004	-2.88**
<b>Region</b>				
Urban	-.001	-1.47	-.001	-1.20
Number of observation		8823		9211
Probability>F		.078		0.89
R-Square		.0064		0.58
Adjusted R-Square		.0044		0.004

Note: \*, \*\* and \*\*\* represent significant at 1%, 5% and 10% level respectively

**Table-4: Children Education Status, Female Own Household Enterprises & Empowerment (by Gender) – First Stage Regression**

Dependent Variable: Empowerment	Girls		Boys	
	Estimated Coefficient	t-stats	Estimated Coefficients	t-stats
Child Age	.013	4.95**	.013	4.64**
Household Earner	-.012	-1.31	-1.01	-1.01
Dependency Ratio	.007	0.75	.012	0.87
Female Head	-.0001	-0.03	-.001	-0.26
Ratio Entrepreneur income & Household income	-.003	-1.61	-.001	-0.78
Ratio Female wage & Male wage	.136	2.46**	.062	10.33**
Sex Ratio	-.007	-0.64	.006	0.34
Education difference	.0072	3.89**	.007	3.98**
Age difference	.0007	0.40	-.001	-0.97
<b>Household Characteristics</b>				
Gas	.103	4.26**	.106	4.47**
Electricity	.194	8.04**	.187	7.81**
Toilet	-.028	-1.39	-.019	.020
Water availability (pipied)	-.004	-0.20	-.008	-0.35
Congestion	.138	2.29**	.137	2.31**
<b>Province</b>				
Punjab	.511	20.43**	.516	21.18**
Sindh	-.015	-0.62	-.026	-1.10

<b>Region</b>	Balochistan	-.339	-14.01**	-.356	-15.48**
	Urban	.018	0.78	.018	0.80
	Number of observation	8823		9211	
	Probability>F	0.000		.0000	
	R-Square	0.144		0.148	
	Adjusted R-Square	0.143		0.146	

Note: \*, \*\* and \*\*\* represent significant at 1%, 5% and 10% level respectively.

## CONCLUSION AND POLICY IMPLICATION;

The paper empirically investigated the mother's ownership of household enterprises on her children's employment and enrollment status, controlling for some socio-economic and demographic variables. As the relationship could be bi-directional, the empirical assessment is done after controlling for the presence of endogeneity. The results show that female involvement in household enterprises affects girls' employment positively while reducing their education probability. The same is true for boys' involvement in economic activity. Further, for empowerment study concludes that mother empowerment remains insignificant in explaining their children's employment but its effect on their children's enrollment is significant. Female ownership of household enterprises impacts positively on their child's early age working which disconnects the child's schooling or increases the workload on them. Policymakers should adopt a policy that restricts child labor. As educated mothers care more for the well-being of children as compared to uneducated females, an educated mother could take sound decisions by the allocation of time to get maximum benefit for the family. A well-educated mother produces educated children and provides shelter to the new generation. Female workers always think about the well-being of children although work-family conflict arises, State should encourage female entrepreneurs that are boosting economic prosperity, and balance gender inequality in society through job creation in the economy.

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Annex-1

**Table A.1: Variables definition and construction**

<b>Variable name</b>	<b>Definition and construction</b>
<b>Age</b>	Age in complete years
<b>Age Square</b>	Age square
<b>Years of Education</b>	Years of education
<b>Child Age</b>	Age in completed years if the individual is less than 15
<b>Child Education</b>	Years of education if an individual under study is less than 15
<b>Dependency Rate</b>	Dependency ratio is calculated as the sum of individuals aged less than 15 and age greater than 65 as the ratio of the number of individuals between age 15 to 65
<b>Child in Labour force – if girl</b>	Children in economic activity with and without pay if girl
<b>Child in Labour force – if boy</b>	Children in economic activity with and without pay if boy
<b>Child Labour force participation Rate</b>	# Children in economic activity under a mother
<b>Households own and operate enterprise</b>	Female if Own and operate enterprises - dummy variables if own enterprises equal 1 otherwise 0
<b>Child Enrolled – if girl</b>	Children in school if girl
<b>Child Enrolled – if boy</b>	Children in School if boy
<b>Children Enrollment Rate</b>	# Children Enrolled under a mother
<b>Gender of the head being Male</b>	Gender of the Head of household - dummy variables if male equal 1 otherwise 0
<b>Spouse Earning</b>	Spouse Earning in Rs.
<b>Number of Earners</b>	Number of earners in the house
<b>The ratio of Expenditure` to household Income</b>	Total Income vs. Total expenditure ratio
<b>Ratio of female wage to male wage</b>	Ratio of female wage to male wage in Rs.
<b>Sex Ratio (Ratio of female members to male members)</b>	Ratio of female members to male members
<b>Education difference between husband and wife</b>	Female years of education – spouse years of education
<b>Age difference between husband and wife</b>	Female age – spouse age
<b>Availability of Piped Water</b>	The delivery system of water is through a network of pipes equals 1 otherwise 0
<b>Availability of gas</b>	The main fuel source for cooking is gas equals 1 otherwise 0
<b>Availability of Electricity</b>	The main source used for light is equal 1 otherwise 0
<b>Congestion</b>	Room per person
<b>Availability of flush Toilet</b>	Available of proper toilet facility equals 1 otherwise 0

*Source: Author's compilation*