Intra-Household Bargaining Power and its Impact on the Female Labor Force Supply in Pakistan: Women Empowerment Perspective

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ABSTRACT

Female labour participation is critical to the country's socioeconomic growth. This quantitative study aims to assess female decision-making processes in Pakistan, considering endogenous intra-household empowerment and female labour-force participation. The study's theoretical foundation is derived from the conventional Collective Bargaining Model of the family. According to the collective model, bargaining among household members serves as the foundation for household decisions, and these decisions shift the balance of power within the family. Cross-sectional data from the Pakistan Social and Living Standard Measurement Survey (PSLM) for 2013-14 were utilized in the study. We developed an Index of Female Bargaining Power (BPF) to measure the BPF and its relationship with female labour supply (FLS). In addition, the household and individual characteristics of females are considered in this study. To capture the endogeneity of women empowerment inside the home, the Instrumental Variable (IV) method is used. The study's findings indicated a strong and substantial endogenous relationship between the BPF and FLS.

Keywords: Female Labor Supply, Bargaining Power, Endogeneity, IV Technique, PSLM

JEL Classification: J10, J11, J13

1. INTRODUCTION

Bargaining power is a complex phenomenon that assorts a person's strength and includes interactions for household decision making. In such a system, an individual with a high level of bargaining power reaps many advantages. Nevertheless, the outcomes may change owing to differences in consumption, education, and health (Chen et al. 1981, Duflo and Udry 2004,

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Dercon and Krishnan 2000, and Ilahi 2000). Bargaining power, in other words, reveals the discrepancies in the family decision-making process. Meanwhile, negotiating power provides more access to resources and influence in a home as well as greater control over household or financial resources. This would eventually result in a more balanced power dynamic within the family.

In Pakistan, the traditional patriarchal system includes female as a binding component that binds all household members together with duty. Aside from that, females are commonly influenced by a variety of prejudices and difficulties in everyday life, ranging from household duties to their career. Nonetheless, females' accomplishments are rarely appreciated and recognized because they are usually underpaid and unrecognized in the family structure. These plights have an impact on their social, traditional, and cultural elements. As a result, girls continue to be unreasonably poor, uneducated, and malnourished, and their decisions about job and education remain contingent on their male heads i.e., father, husband, or brother. Traditionally, a female's negotiating power relates to her wages and possessions which allows her to be more vigilant in family decision making. The reasoning behind this belief is convincing such as an increase in female earning capacity improves their decision-making. Female labour supply causes two sorts of aberrations in female's lifestyle. First, when a woman actively engages in the labour force and earns an income, her decision-making authority increases as well as her negotiating ability. Secondly, employment gives women a sense of autonomy and uniqueness which necessitates a unique perspective on difficulties and vexing situations. In summary, female labor-force involvement empowers women, and therefore, bargaining power impacts female earning capacity and social power.

Pakistan's population of 215.25 million people is made up of 48.41 percent females and 51.59 percent men.[4] Despite witnessing progress and structural changes in the Pakistani economy, the female labour supply rate remains the lowest in the region when compared to other economies. Females are more likely to be absorbed in the informal sector and are underemployed as a result of the sluggish economic development in the real sectors of the economy. They are deprived of their legal rights owing to a lack of a decent working environment. As a result, they are compelled to labour in hazardous and disagreeable circumstances on low salaries in comparison to males. Furthermore, females in Pakistan face

[4] Source: Pakistan Economic Survey 2020-21

regular disparities in education, health, and possession of productive assets. This disparity in ownership of productive resources has also reduced their negotiating power in family decision-making. In the absence of these specifics, the future significance of females in Pakistan is therefore, a critical responsibility that must be honored in an equal manner. The conclusion of the preceding debate demonstrates that female empowerment is dependent on female decision-making in the family. This study aims to emphasize the importance of female negotiating power inside the home and its relationship with female labour force participation in Pakistan. The endogenous link between female labour supply and her negotiating power within the home, dubbed "Intra-Household Bargaining Power," is investigated in this study. To the best of our knowledge, this study is unique in a sense that it includes female intra-household bargaining power into the conventional model of female labour supply.

The remainder of this article is divided into six sections. The following section provides the theoretical foundation, while the third section evaluates previous literature. The methodological framework is presented in the fourth section. The fifth section contains empirical analysis and findings, and the sixth section provides the conclusions of this study.

2. Theoretical Background

The theoretical framework of family decision making revolves around two opposing models: the Unitary Model and the Collective Model. The Unitary Model describes a separate utility function for households in which the household head (male or female) is the decision-making unit, whereas the Collective Model encourages collaborative decision-making by the household head and other family members. The unitary model's primary weakness is its inability to include family dynamics such as decision making by other household members for schooling, job, marriage, reproduction, access to food, and financial resources etc. Chiappori (1988) and Browning and Chiappori (1998) were focused on family behaviour by utilizing the Collective Model Approach (CMA). The model posits that the utility function of a family is a weighted sum of the utilities of each member of the family, where each has its own bargaining power in the household decision-making process. To be more specific, the model implies that a female's education and wages are two critical elements in her negotiating power, whether she is married or not.

Basu (2006)'s bargaining power model is widely seen as accommodative. He dubbed the power into the "Intra-Household Bargaining Power Model," which delegated the association between

female and male members of a household. The study focuses on the impact of female endogenous bargaining power in influencing female labour force supply. He praised female negotiating power endogenously and deduced that both husband and wife use exogenous bargaining power to locate their respective supply of labour. The Home Unitary Model, which has been employed in traditional economics for quite some time, displays a complex and challenging viewpoint of the family unit. This is the outcome of theoretical advances, empirical investigations, and anthropological penetrations into the original Unitary Model for the Household. It has been observed that a female with a high level of negotiating power in a family can bring about changes in her family structure. The more a woman makes, the more she contributes to the household, and the larger her decision-making and negotiating power. Furthermore, the internal balance of power within the household influences family choices.

3. LITERATURE REVIEW

Zingwe et. al., (2021) investigated the impact of intra-household power dynamics on food security and household nutrition. The findings shed light on the current state of gender disparity in family decision-making. Tagat (2020) investigated the effects of workfare programs on women's decision-making for five Indian states by utilizing household survey data on individual decision-making. Following the MGNREGS[5], the pattern of food intake, and child health decisions, more females are involved. Many of these changes might be attributed to an increase in relative endowments. Van, Fintel, and Pasha (2018) investigated the relationship between female autonomy and female labour force participation and discovered a statistically significant link between the variables. Their findings show that increasing female autonomy boosts female labor-force participation by ninety-two percent. Dasgupta (2016) studied the link between female labour force participation and endogenous bargaining power and discovered a statistically significant relationship between the variables. In contrast to the traditional labour supply standard models, Heath and Tan (2014) believed that a female's unearned income increases her power in the home. This may increase her desire to work, and we may see a positive relationship between female labour supply and unearned income. The data were assessed using the instrumental variable approach by using 2005-2006's data of National Family Health Survey of India. Female exposure was predicted by the instrumental variables birth year, religion, and state. Antman (2013) examined the relationship between negotiating

[5] The MGNREGS Act 2005 aims at enhancing the livelihood security of people in rural areas by guaranteeing hundred days of wage-employment in a financial year

power and the job status of the household head and his or her companion and discovered that if a female is working, she has more access to economic assets and resources. The Mexican Family Life Study panel data survey from 2002 to 2006 was used to explore this link. Sinha (2012) used cross-sectional data from the National Council for Applied Economic Research from January to June 1994 to evaluate the influence of household decision making on couples' labour supply in Indian rural regions. Unitary and aggregate Collective Model investigations revealed that bargaining power between spouses shaped the premise of household decisions, and these decisions modified internal bargaining power of households. In view of the widespread desire for sons in China, Li and Wu (2011) used data from the Health and Nutrition Survey in nine Chinese provinces for the years 1993, 1997, 2000, 2004, and 2006. Their findings revealed that if a woman's first kid is a son, she has 3.9 percent more negotiating power than a woman whose first child is a girl. Furthermore, having a boy increases the mother's nutrient consumption. Using the Ethiopia Demographic Health Survey, Mabsout and Staveren (2010) discussed whether bargaining power contributes to uneven social standards. The authors expected that the normal, conflicting, and illogical outcome of literature might be clarified by extraordinarily uneven gender norms and standards referred to as “gendered institutions,” and that gender policy arrangement may be more effective. Marriage, according to Lundberg and Pollak (2008), is a two-stage game in which the allocation, distribution, and sharing of resources, and the utility is based only on bargaining between potential spouses, after which spouses are not permitted to amend or adjust anything. Blundell et. al. (2007) reported the predicted results in the aggregate Collective Model of labour supply, concentrating on various preferences such as shorter working hours and non-participation. The consequences of the aggregate Collective Model were accepted, while the Unitary Model's suggestions were rejected. The authors examined the huge differences in pay structure between males and females in the United Kingdom over the last two decades for married couples with no children. Lancaster et al. (2006) modelled household labour supply decision making by accounting for the endogeneity of the decision-making process. They examined the critical concerns of labour supply and the impact of non-participation and nutritional condition of household members. The findings indicated that, despite the relevance of nutritional status for health and productivity, family labour supply behaviour in emerging economies has not been considered. Basu (2006) proposed exogeneity as a constraint of the aggregate Collective Models. He accepted it in light of the fact that the family's power balance influences the family's decisions. As a result, these decisions have an influence on the family's internal power balance. Koolwal et. al. (2002) used the "Collective Approach" to households by integrating and calculating a

general guideline in which the weights were computed and decided by family results. They concluded that when a woman's qualification increases, so does her negotiating power. Iyigun (2002) proposed a microeconomic home model in which spousal bargaining power was integrated endogenously and according to their relative value in the labour market. Meanwhile, the study hypothesized that as females earn more money, their fertility drops, as do their educational attainment, quality of life, and lifespan. Agarwal (1997) emphasized multidimensional variables and examined the dynamics of gender relations and their connections in the context of intra-household bargaining. The study included both qualitative and quantitative arguments on gender dynamics and the bargaining process within and outside the family. Haddad et. al. (1989) undertook an empirical study to determine the theoretical and practical potential of an intra-household Kuznets curve. The results were uncertain, but the micro data for the family offered preliminary evidence for a Kuznets curve. Senauer (1988) discovered that "the estimated wage rate of the wife and mother has a significant positive impact on the relative calorie allocation to both herself and her children and a negative effect on the husband's allocation" in rural Philippines, but the sample size is too small to allow scaling disaggregation. Sutton (1986) gave an overview of the "sequence" or "non-cooperative" bargaining models. The author focused on a particular link between the conventional axiomatic technique and the new approach presented by "Nash bargaining theory." The difficulties encountered in expanding bi-person negotiations and to nth individual discussions with incomplete knowledge were considered intuitively. To describe how two individuals must achieve a contract, Rubinstein (1982) focused on the individual bargaining process of two people in an inter-temporal framework. He went on to say that everyone must come up with a recommendation for how it should be divided in turn.

To study the relationship between female autonomy and economic growth, Atiq and Qadri (2021) discovered that the influence of female autonomy on economic growth is strong in both the long and short term. The study used yearly dataset of 48 Asian countries from 2003 to 2018, and found that reduced gender inequality in tertiary education has a positive influence on economic growth. In addition, the study emphasizes the need of boosting women's educational attainment and decreasing gender disparities at all levels of educational attainment in order to improve long- and short-term economic potential. Using the data from the PSLM 2013-14 and the instrumental variable approach, Malik and Mujahid (2019) studied the influence of job finding rate and women empowerment on female labour supply and discovered a substantial relationship between the variables. Isran and Isran (2013) investigated the link between female

labour force participation and endogenous bargaining power, and found a statistically significant relationship between the two variables. Bibi and Afzal (2012) set out to discover the factors that impact the female labour supply of married women. They discovered that education, the number of children in the household, the number of dependent persons in the household, the size of the household, the spouse's income, the household's monthly expenditures, the husband's and family's positive attitude toward female labour supply, and job satisfaction all have a direct impact on female labour supply. Hussain et al. (2012) investigated the factors that influence women's engagement in paid work in three Pakhtun villages in Pakistan's Khyber Pakhtunkhwa region. The logistic regression technique was used to determine the socio-cultural, demographic, and ethnic factors that influence female labour supply. Female involvement was shown to be significantly correlated with respondents' education, age, family type, ethnic origin, number of dependent family members, and number of literate females in the home. Shaheen et. al. (2011) used Punjab's Multiple Indicator Cluster Survey to look at female labour supply trends in Pakistan (2007-08). The logit approach revealed that the household head's education was negatively related to female labour supply, but female labour supply is statistically significant if the concerned female is married and lives in a city. The income of married women is higher than that of unmarried women. Ejaz (2011) re-examined the determinants of female labour supply in Pakistan's rural and urban areas. Female labour supply was shown to have a statistically significant and indirect link with both birth rate and gender wage gap, as well as a statistically significant and direct relationship between female labour supply, home labour saving appliance ownership, and joint family system. Faridi et al. (2009) used micro-data collected during a ground survey. The female labour supply was calculated using the logistic regression technique. The findings confirmed that as one's degree of education rises, so does the availability of female labour. Female labour supply, on the other hand, is reduced if she has more children at a young age. Ejaz (2007) used logit and probit methods on cross-sectional data from a sample of females aged 15 to 49 to investigate factors that impact female labour supply in Pakistan. The findings suggested that education, marital status, and age all had a direct and significant influence on female labour supply. Having more children and having access to domestic luxury items, on the other hand, would reduce the number of women in the labour force.

A quick review of national studies reveals that few studies have looked at the many drivers of female labour supply in Pakistan. Whereas, to the best of our knowledge, the existing research in Pakistan does not clearly address the female negotiating power and its endogeneity.

4. METHODOLOGY

Using cross-sectional data from the Pakistan Standards of Living Measurement Survey (PSLM) for the year 2013-14, this study investigates the female labour supply. It is worth noting that the selected data includes the most up-to-date information from the decision-making module, which is a crucial component for calculating the negotiating power index. Furthermore, the Instrumental Variable (IV) method is used to investigate both exogenous and endogenous factors.

In this paper, we look at Chiappori (1988) basic, functional form for determining female labour force supply decisions in collective home behaviour.

$$\boldsymbol{BPF = f(WC, HHC, IV)} \quad \textbf{(1)}$$

$$\boldsymbol{FLS = f(WC, HHC, BPF)} \quad \textbf{(2)}$$

FLS is for Female Labour Supply, WC stands for Women's Characteristics, HHC stands for Household Characteristics, IV stands for Instrumental Variables, and BPF stands for Female Bargaining Power.

4.1 Index of Bargaining Power of Female

The capacity of females to participate in decisions about various home problems is measured by the index of bargaining power of women. Employment, education, having more children, birth control techniques, clothes and footwear, medical care, travel and entertainment, and food intake are among the issues addressed. We combined the replies during the estimate and condensed them into three major descriptions, as shown in table 1.

Table: 1
Categories of Bargaining of Female

S. No.	Category	Description	Rank
1	Other Household and Family Member	Concern Female Not Included	**1**
2	Joint Decision	Concern Female Included	**2**
3	Female Herself	Female Herself Alone	**3**

Source: Prepared by Authors. Note: 1 = as least bargaining power a female has, 2 = means normal bargaining power and 3 = is classified as most bargaining power.

To create the female negotiating power index, we used Factor Analysis. Primary variables are used in factor analysis to reveal the outline of relationships among the above-mentioned variables. The variances of all the vast number of indicators are combined in the form of an index in this study, which is commonly used in data.

4.2 Estimation Procedure

Because limited researches are not feasible, the IV method is practical for estimating causal connections between female bargaining power and female labour supply (Angrist and Imbens 1995). As a result, we use the Two-Stage Least Square (2SLS) approach as well as the IV methodology. Taking into account the resulting equations;

$$\boldsymbol{Y_i = \beta_0 + \beta_1 X_i + \varepsilon_i} \quad \textbf{(3)}$$

$$\boldsymbol{X_i = \alpha_0 + \alpha_1 Z_i + \epsilon_i} \quad \textbf{(4)}$$

4.3 Identification

The relationship between the quantity of instrumental variable (m) and the quantity of endogenous variable (k) in the model is used to identify estimated coefficients in IV regression. Because m>k, the model is over-identified in our situation. To compute one endogenous variable, we need three instrumental variables.

4.4 Post Estimation Tests

Both the test of endogeneity and the test of over identification are required for reliable and consistent estimate when utilizing the 2SLS technique for IV regression.

4.5 Testing for Endogeneity - Wu-Hausman Test

If there is no endogeneity problem, the Ordinary Least Square (OLS) approach is preferred than IV regression or 2SLS. As a result of the reverse causality with female labour supply, we would like to evaluate the endogeneity of female negotiating power. In this case, the Hausman Test for endogeneity is useful. This test's null hypothesis is that residual is zero and female negotiating power is exogenous. If the null hypothesis is rejected, female negotiating power is endogenous.

4.6 Over-identification Restrictions Test Using the Sargan Test

The Sargan Over-identification Restriction Test calculates the estimated error terms ($\boldsymbol{\varepsilon_i}$) by using 2SLS to estimate the structural equation. The estimated error terms are then applied to the whole set of regressors. The null hypothesis states that all IVs are unrelated to estimated $\boldsymbol{\varepsilon_i}$.We must reject the null hypothesis if the test statistic value exceeds the critical threshold, implying that at least some of the instruments are not exogenous.

4.7 Model specification

4.7.1 Stage 1: Estimating the probabilities of Bargaining Power of female

In the first step, we use additional control factors to regress female bargaining power on instrumental variables. Instruments are chosen based on the fact that they have a direct impact on female negotiating power; yet, they have no direct correlation with female labour force participation rates.

$$BPF_i = \alpha_0 + \alpha_1 \mathrm{AGE}_i + \alpha_2 \mathrm{AGESQ}_i + \alpha_3 \mathrm{HEDU}_i + \alpha_4 \mathrm{OI}_i + \alpha_5 \mathrm{FI}_i + \alpha_6 \mathrm{WP}_i + \alpha_7 \mathrm{IHUS}_i + \alpha_8 \mathrm{HEDUHUS}_i + \alpha_9 \mathrm{AGEHUS}_i + \alpha_{10} \mathrm{EXPSH}_i + \alpha_{11} \mathrm{INSH}_i + \alpha_{12} UPFW_i + \alpha_{13} MS_i + \epsilon_i \quad \textbf{(5)}$$

4.7.2 Stage 2: Measuring Female labour Supply considering Intra-Household Bargaining Power

In the second stage, the estimated likelihood of female bargaining power is utilized to estimate the Female Labour Force Supply equation.

$$FLS_i = \beta_0 + \beta_1 BPF_i + \beta_2 \mathrm{AGE}_i + \beta_3 \mathrm{AGESQ}_i + \beta_4 \mathrm{HEDU}_i + \beta_5 \mathrm{OI}_i + \beta_6 \mathrm{FI}_i + \beta_7 \mathrm{WP}_i + \beta_8 \mathrm{IHUS}_i + \beta_9 \mathrm{HEDUHUS}_i + \beta_{10} \mathrm{AGEHUS}_i + \varepsilon_i \quad \textbf{(6)}$$

FLS stands for female labour supply. Female negotiating power is predicted to have a positive relationship with female labour supply.

5. ESTIMATION RESULTS AND DISCUSSION

The findings of a two-step instrumental variable regression of female labour supply via the lens of female bargaining power are presented in this section. Table 2 displays the results of the two-stage regression equations for female bargaining power and female labour supply.

With 4,176 observations, table 2 displays the results of both phases of Instrumental Variables Regression. Stage one's F-statistics and stage two's WALD 2 statistics both demonstrate that the model is statistically significant. At a 5% level of significance, the variable bargaining power of women (BPF) exhibits a substantial positive association with female labour supply (FLS). FLS increased by 1.11 if the BPF increased by 1%. This data supports the idea that a higher BPF leads to more independence, allowing her to confidently participate in the labour market. Female age (AGE) is a significant factor in explaining the dependent variables FLS and BPF. This variable has a 5% and 1% negative and positive correlation with FLS and BPF, respectively, and is statistically significant. Bibi and Afzal (2012) discovered a similar result.

Table: 2
Instrumental Variables Regression

NUMBER OF OBS		4176		**NUMBER OF OBS**		4176
F (13, 4162)		20.55		**WALD χ2(10)**		35.43
PROB > F		0.000		**PROB > χ2**		0.0025
R-SQUARED		0.0503		**R-SQUARED**		.
ADJ R-SQUARED		0.0474		**ADJ R-SQUARED**		.
ROOT MSE		0.8404		**ROOT MSE**	=	0.9306
Dependent Variable is BPF				**Dependent Variable is FLS**		
Variables	**Coefficient**	**t**	**P>t**	**Coefficient**	**Z**	**P>z**
BPF	-	-	-	1.106687	2.03	0.042
AGE	0.1059311	11.22	0.000	-0.115884	-1.95	0.051
AGESQ	-0.0013914	12.06	0.000	0.0015187	1.95	0.051
HEDU	0.0293182	6.17	0.000	-0.0332301	-1.94	0.053
OI	-9.89E-06	-2.75	0.006	0.0000109	3.33	0.001
FI	2.41E-06	2.66	0.008	-3.20E-06	-2.26	0.024
WP	-0.0058556	-0.42	0.677	0.015245	1.07	0.286
IHUS	-1.60E-07	-0.14	0.889	7.13E-07	0.58	0.564
HEDUHUS	-0.0278413	-5.65	0.000	0.0308766	1.92	0.054
AGEHUS	-0.0000196	-0.01	0.995	0.0001744	0.05	0.958
EXPSH 1	0	-	-	-	-	-
2	0.0186799	0.29	0.774	-	-	-
INSH	0.4982305	1.82	0.068	-	-	-
UPFW 0	0	-	-	-	-	-
1	0.0600943	0.50	0.616	-	-	-
MS 0	0	-	-	-	-	-
1	-0.0644782	-0.73	0.463	-	-	-
CONS	-1.518457	-6.38	0.000	1.709823	1.92	0.055

Source: Authors' own estimation

The rationale for this link is that as women become older, they become more active and have less household obligations, allowing them to work outside the home. As a married woman's age grows, her obligations diminish, and she has more time to devote to her work. As a result, her labour supply diminishes as she grows older. The dependent variables FLS and BPF are significantly explained by the variable age square (AGESQ). This variable has a positive and negative relationship with FLS and BPF, and is statistically significant at 5% and 1%, respectively. The rationale for this link is that as women become older, they become less active and unable to fulfil obligations, hence their BPF drops. Female education (HEDU) is favorably related to the BPF and adversely related to the FLS. At the 1% and 5% levels, respectively, the results are statistically significant. Gaining more bargaining power entails becoming more

active in household decision-making. Education is a critical tool for improving bargaining power, as well as awareness, knowledge, information, skills, and self-confidence, all of which are required to fully engage in the family decision-making process. Education is vital and contributes significantly to female negotiating power. As a result, in Pakistan, female education enhances negotiating power. Educated women, on the other hand, look for jobs that match their qualifications. Females are unable to obtain work in a country with high unemployment, less possibilities for women, and a saturated labour market. As a result, in Pakistan, FLS diminishes because of female education. Female income (INSH) has an indirect relationship with the BPF and is statistically significant at the 1% level, but it has a direct relationship with the FLS and is statistically significant at the 1% level. Typically, as a woman's income rises, she is urged to expand her supply of labour, especially if she is married, so she may earn more. Family income (FI) has a direct relationship with the BPF and is statistically significant at the 1% level, while it has an indirect relationship with the FLS and is statistically significant at the 5% level. The explanation for the direct relationship is that greater family income equals more resources to spend and more independence for women. As a result, in Pakistan, bargaining power rises in tandem with household wealth. And the idea behind the indirect link is that when family income rises, so does the overall number of resources accessible to the home. When a family's wealth rises, females, particularly married women, are typically obliged to cut their working hours or, in extreme cases, quit their jobs. As a result, her labour supply decreases. In the case of Pakistan, the variable number of working individuals (WP) is statistically negligible in explaining BPF and FLS. The variable husband's income (IHUS) has no statistical significance in explaining BPF and FLS. The BPF is adversely linked with spouse education (HEDUHUS), whereas the FLS is favorably associated. At 1 percent and 10%, respectively, this connection is statistically significant. Hafeez and Ahmed (2002) came at the same conclusion. The educational achievements of the husband have an influence on job possibilities. FLS is projected to rise because of the husband's schooling. The possibility is that her husband's knowledge is expanding, and he is allowing her to work outside. In the instance of BPF, when the husband's knowledge improves, he begins to make all the family decisions, and BPF declines. In Pakistan, the variable age of the spouse (AGEHUS) is statistically irrelevant in explaining BPF and FLS. EXPSH is a variable that indicates whether a female contributes to household costs. At the 1% level, this variable is statistically significant and has a negative influence on BPF. The logical explanation for this is that women are permitted to work solely for monetary gain. Given her negotiating power, this isn't a good thing.

The variable female income share in overall family income (INSH) is statistically significant and has a 10% positive relationship with the BPF. Education, as well as awareness and information, are essential for actively participating in the family decision-making process.
The variable female as unpaid family worker (UPFW) is statistically significant and has a 1 percent negative relationship with the BPF. If women stay at home, their efforts go unnoticed, and their BPF falls. The variable married status (MS) is statistically significant and has a 1% negative relationship with the BPF. Married women's voices are rarely heard.

5.1 Post Estimation Results

The following are the results of post-estimation:

Table: 3
Testing for Endogeneity - Wu-Hausman Test

Tests of endogeneity						
Ho: variables are exogenous						
Robust	score $\chi 2$ (1)	=	100.639	P	=	0.0000
Robust	Regression F(1,4164)	=	261.989	P	=	0.0000

Source: Estimated by Authors.

The accompanying table demonstrates that the female's negotiating power is endogenous.

Table: 4
Over-identification Restrictions Test Using the Sargan Test

Test of over-identifying restrictions:						
Score	$\chi 2$ (3)	=	5.48762	p	=	0.1394

Source: Estimated by Authors.

Because the null hypothesis is accepted, the preceding table indicates that the test statistic is statistically insignificant, indicating that the instruments are uncorrelated with the error term and that the instruments are valid.

5.2 Discussion

Despite experiencing high and low economic growth, and development and structural changes in Pakistan's economy, the female labour supply rate remains the lowest in South Asia when compared to its regional counterparts. This is mostly due to the kind of opportunities available to women in the labour markets as they are unfairly assumed to be poor, uneducated, and undernourished. It is also contingent on their home heads (either father or husband) deciding whether or not they should be incorporated into informal economic activities or continue to work as an unpaid family worker. In Pakistan, women are typically incorporated into the informal economy, where they work in extremely dangerous and disagreeable conditions. They

are underpaid, have no legal rights, and do not have regular working hours which paints an image of deprivation. Given Pakistan's traditional and patriarchal society, female labour supply has a significant relationship with not just changing home arrangements, but also with female negotiating power as it entitles female empowerment inside the household.

The female negotiating power can be analyzed in a couple of ways, each of which reveals different patterns in female labour supply. For starters, women with more negotiating power choose to spend their time relaxing rather than working (Schultz, 1990; Grossbard, Shechtman, and Neideffer, 1997; Chiappori et. al., 2002; Angrist, 2001). Second, this school of thought emphasizes that in a patriarchal culture, not all females can fully benefit from their financial position. Females' advantage from such resources is solely dependent on the social and cultural framework that limits women's negotiating power in many ways (Agarwal 1997). We discovered a link between negotiating power and labour force participation, implying that women in Pakistan are more empowered. The greater negotiating power of women increases not just their labour supply, but also their social and economic standing in society. Furthermore, it gives individuals the ability to govern and direct their earnings and income, as well as having a say in the birth control choices. The findings support the notion that a woman's economic well-being is linked to her status in the home. As women gain negotiating power, their family members' and society's opinions shift and change from the conventional viewpoint. Eventually, men are more likely to engage females in decision-making processes, resulting in a progressive system in which both males and females have a place on the same ladder. In Pakistan, women's negotiating power is both real and imagined.

6. CONCLUSIONS

Based on empirical estimation this study found that a female with weaker negotiating power is less likely to participate in household revenue production which confirms Basu (2006)’s theoretical paradigm. Females in Pakistan are more impoverished than their male heads, whether father or husband, therefore the estimation findings are logical. They are unnoticeable both monetarily and economically. Discrimination in the home and at workplace, marriage, and childcare are all factors that contribute to this. As a result, they may stop participating, earn lower salaries, and contribute less to economic activity. Women will be more involved in the decision-making process inside home, at work, and in society if their negotiating power is increased. Female financial strength and economic prospects would boost family income and

ultimately female labour supply. In addition, the female will have the opportunity to assist the male in a big way. As women gain negotiating powers, their family members' and society's opinions shift accordingly from the orthodox viewpoint of women suppression in a patriarchal society.

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