

What Shapes Women's Bargaining Power Within Households?

Evidence from Jammu and Kashmir, India

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Abstract

This study investigates the determinants of women's intrahousehold bargaining power in the Samba and Reasi districts of Jammu and Kashmir, India, addressing a significant empirical gap in a region with distinct socio-cultural characteristics. Using primary data from 400 households, a composite Bargaining Power Index (BPI) is constructed through Principal Component Analysis (PCA) by integrating six dimensions of empowerment: decision-making, income control, mobility, healthcare, expenditure, and resource ownership. Ordinary Least Squares (OLS) regression with robust diagnostic tests identifies education, employment, financial inclusion, land ownership, asset ownership, and media exposure as significant positive determinants of women's bargaining power. In contrast, household income, self-help group membership, digital access, caste, religion, and urban residence are found to have no significant influence. District-

level analysis reveals marked heterogeneity, with women in Samba exhibiting significantly higher bargaining power than those in Reasi ($p < 0.001$). The estimated model explains 65.1% of the variation in bargaining power, while theoretical interpretation using bargaining and gender frameworks highlights the central role of human capital and productive assets in strengthening women's negotiating position within households. The findings underscore the need for context-specific policies promoting education, employment, financial inclusion, and women's asset ownership. By providing the first comprehensive quantitative evidence from Jammu and Kashmir, this study contributes to the literature on women's empowerment and intrahousehold bargaining in developing economies.

Keywords: Bargaining power; intrahousehold decision-making; gender empowerment; financial inclusion; asset ownership.

1. Introduction

Women's intrahousehold bargaining power, which refers to the capacity to influence household decisions, control resources, and exercise autonomy, constitutes a fundamental dimension of gender equality and human development (Agarwal, 1997; Sen, 1999). Bargaining power shapes critical outcomes, including household resource allocation, children's education and health, women's labour force participation, and overall household welfare (Anderson & Eswaran, 2009; Duflo, 2012; Hoddinott & Haddad, 1995; Thomas, 1990). In the Indian context, where patriarchal norms, son preference, and gender-based discrimination continue to influence women's agency and decision-making, understanding the determinants of women's bargaining power is essential for designing effective gender empowerment interventions and advancing Sustainable Development Goal 5 (Alakshendra & Li, 2024; Barik et al., 2026; Jejeebhoy, 1998)

Despite extensive research on intrahousehold bargaining in India, significant gaps persist. Most existing studies have focused on southern and western states or relied on nationally

representative datasets that often mask substantial regional heterogeneity.(Dyson & Moore, 1983; Kumar & Mondal, 2024)Jammu and Kashmir (J&K), a region characterized by distinct socio-cultural dynamics, conflict-affected development trajectories, and unique religious and ethnic diversity, remains underrepresented in the empirical literature on women's bargaining power. Available evidence suggests that women in the region continue to face constraints arising from patriarchal social norms, patrilocal residence patterns, limited mobility, and gender-based inequalities (Tripathi et al., 2023) However, comprehensive quantitative analyses examining the determinants of women's intrahousehold bargaining power across districts in J&K remain scarce.

This study addresses this important research gap by examining the determinants of women's intrahousehold bargaining power in the Samba and Reasi districts of Jammu and Kashmir. These districts represent contrasting socio-economic settings within the Jammu division, with Samba characterized by relatively better connectivity, greater urbanization, and higher economic development, whereas Reasi is predominantly rural and hilly with comparatively traditional socio-economic structures. This variation provides an opportunity to examine how the determinants of women's bargaining power differ across diverse local contexts within the same regional setting.

The study aims to develop a comprehensive multidimensional measure of women's intrahousehold bargaining power using Principal Component Analysis (PCA), identify and quantify its determinants across individual, household, and community-level characteristics, and examine district-level heterogeneity in both bargaining power and its underlying determinants. To achieve these objectives, the study employs rigorous quantitative techniques, including PCA-based index construction (Jolliffe, 2002.) and multivariate Ordinary Least Squares (OLS) regression with comprehensive diagnostic testing. The empirical analysis is further informed by complementary theoretical perspectives, which includes Nash bargaining theory,

collective household models, and feminist bargaining theory, which together explain how economic resources, social norms, and institutional factors shape women's bargaining outcomes within households ((Agarwal, 1997; Chiappori & Lewbel, 2015; Manser & Brown, 1980; McElroy & Horney, 1981)

This study contributes to the literature by examining the determinants of women's intrahousehold bargaining power in the Samba and Reasi districts of Jammu and Kashmir, where empirical evidence on household bargaining remains limited. It adopts a multidimensional approach by constructing a composite Bargaining Power Index (BPI) using Principal Component Analysis, thereby enabling a comprehensive assessment of women's bargaining position across multiple domains of household decision-making. The study further investigates the influence of individual, household, and community-level factors on bargaining power while examining district-level heterogeneity in both bargaining outcomes and their underlying determinants. By integrating multiple theoretical perspectives with robust quantitative methods, the study contributes to a deeper understanding of intrahousehold bargaining dynamics in a region that has received limited scholarly attention. The findings are expected to enrich the literature on women's empowerment by providing context-specific evidence from Jammu and Kashmir and generating policy-relevant insights for strengthening women's position within households.

2. Literature Review and Conceptual Framework

2.1 Conceptual Foundations

The literature on intrahousehold bargaining has progressively shifted from the unitary household model toward collective and bargaining approaches that recognize households as arenas of negotiation among members with heterogeneous preferences and unequal access to resources (Chiappori & Lewbel, 2015; Lundberg, 1993; Manser & Brown, 1980; McElroy & Horney, 1981) Within this perspective, women's intrahousehold bargaining power refers to their ability to influence household decisions, exercise autonomy, control resources, and par-

ticipate in decisions affecting household welfare (Friedberg & Webb, 2006). Rather than representing a single attribute, bargaining power is widely viewed as a multidimensional construct encompassing decision-making authority, economic control, mobility, ownership of productive assets, and agency (Alkire, 2007; Malapit et al., 2019)

The theoretical foundations of this literature are primarily rooted in Nash bargaining theory, which argues that household outcomes depend upon each spouse's fallback position or threat point (Manser & Brown, 1980; McElroy & Horney, 1981). Women's education, employment, ownership of assets, independent income, and legal rights strengthen these fallback positions and consequently increase their bargaining power. Feminist bargaining perspectives further emphasize that economic resources alone are insufficient because bargaining outcomes are mediated by gender norms, social institutions, customary practices, and the legitimacy accorded to women's claims within households (Agarwal, 1997; Kabeer, 1999). Collectively, these perspectives suggest that bargaining power emerges through the interaction of individual capabilities, household resources, and the broader institutional environment.

2.2 Human Capital, Economic Resources and Women's Bargaining Power

Economic resources remain the most consistently identified determinants of women's bargaining power. Education improves human capital, labour market opportunities, awareness of rights, and access to information, thereby strengthening women's participation in household decision-making (Duflo, 2012; Kabeer, 1999). Empirical evidence from India consistently reports positive associations between women's educational attainment and indicators of autonomy and household decision-making (Deshpande & Kabeer, 2019)

Employment represents another important pathway through which women strengthen their bargaining position by reducing economic dependence and improving outside options (Anderson & Eswaran, 2009). However, recent research suggests that employment quality is more important than labour force participation alone. Formal employment associated with

stable earnings is generally linked to greater decision-making authority, whereas low-paid informal employment may have weaker effects on bargaining outcomes.

Income has also attracted considerable attention within the bargaining literature. While women's independent earnings generally enhance bargaining strength, household income itself does not necessarily improve women's agency unless women exercise control over financial resources. (Hoddinott & Haddad, 1995; Thomas, 1990) Consequently, scholars increasingly distinguish between access to income and control over income when analysing household bargaining.

Ownership of productive assets, particularly land and housing, constitutes another important determinant of bargaining power. Secure ownership rights improve women's economic security, strengthen their fallback positions, and increase their influence over household decisions (Agarwal, 1997; Agarwal Bina, 1994; Anderson & Eswaran, 2009). Empirical evidence further demonstrates that women's ownership of productive assets contributes to improved investments in children's education, health, and overall household welfare (Duflo, 2012).

2.3 Social and Institutional Determinants

Economic resources operate within broader social and institutional contexts. Patriarchal norms, gender ideologies, kinship systems, and household structure frequently condition the extent to which women's resources translate into effective bargaining power (Agarwal, 1997; Kabeer, 1999). Studies based on Indian data indicate that co-residence with in-laws, patrilocal residence, restrictive gender norms, and acceptance of domestic violence reduce women's autonomy and participation in household decisions. Likewise, caste, religion, and regional socio-cultural environments may reinforce or moderate the effects of economic resources, although empirical evidence regarding their magnitude remains mixed.

The literature therefore suggests that bargaining outcomes cannot be explained solely by economic variables. Instead, they reflect the interaction between women's individual resources and the institutional environment within which household decisions are negotiated.

2.4 Financial Inclusion, Self-Help Groups and Digital Access

Recent literature has increasingly examined financial inclusion, self-help groups (SHGs), and digital access as mechanisms for strengthening women's bargaining power. Access to bank accounts and formal financial services enhances women's financial autonomy and improves their ability to participate in household financial decisions (Demirgüç-Kunt et al., 2022.) Nevertheless, evidence regarding SHGs is mixed. Several studies report positive impacts where SHGs provide substantial credit, capacity building, and institutional support, whereas programmes based on small savings or limited credit often generate modest improvements in bargaining outcomes. These findings suggest that programme design and implementation substantially influence their effectiveness.

Similarly, digital technologies, including mobile phones, internet access, and reliable electrification, may expand women's access to information, employment opportunities, financial services, and social networks (Gibson et al., 2015; Yadav & Sengupta, 2024). However, scholars emphasize that meaningful empowerment depends upon women's actual ownership, control, and effective use of digital technologies rather than mere household-level access.

2.5 Research Gap and Conceptual Framework of the Present Study

Although the literature identifies numerous determinants of women's bargaining power, three important gaps remain. First, empirical evidence is heavily concentrated on nationally representative datasets and a few Indian states, with very limited district-level analyses from Jammu and Kashmir. Second, many studies rely on single indicators of empowerment rather than multidimensional measures that simultaneously capture decision-making, autonomy, mobility, financial control, healthcare decisions, expenditure decisions, and ownership of produc-

tive resources. Third, relatively few studies examine how determinants of bargaining power vary across districts sharing similar cultural backgrounds but differing in socio-economic conditions.

The present study addresses these gaps by constructing a multidimensional Bargaining Power Index using Principal Component Analysis (PCA) and examining its determinants through multivariate regression analysis using primary household data collected from Samba and Reasi districts of Jammu and Kashmir. Guided by Nash bargaining theory, Collective Household Models and feminist perspectives, the study conceptualizes women's bargaining power as the outcome of interactions among individual characteristics, household resources, financial inclusion, institutional arrangements, and socio-cultural factors. This integrated framework provides the analytical basis for investigating the determinants of women's intrahousehold bargaining power in a region where empirical evidence remains limited while contributing context-specific insights to the broader literature on women's empowerment in developing economies.

3. Methodology

3.1 Study Area and Data Collection

This study is based on primary data collected through a household survey conducted between January and March 2024 in the Samba and Reasi districts of Jammu and Kashmir, India. The two districts were purposively selected because they represent contrasting socio-economic and geographical settings within the Jammu division. Samba is characterized by relatively better infrastructure, higher urbanization, stronger market integration, and greater access to public services, whereas Reasi is predominantly rural and hilly, with comparatively lower levels of infrastructure development and stronger adherence to traditional social norms. These contrasting characteristics provide an appropriate setting for examining variations in women's intrahousehold bargaining power across different local contexts.

A stratified random sampling technique was employed to ensure adequate representation of households across urban and rural areas in both districts. The final sample comprised 400 currently married women aged 18–50 years, with 200 respondents selected from each district. Within each district, households were randomly selected from urban wards and rural villages in proportion to their population shares. The survey collected information on respondents' socio-demographic characteristics, education, employment, household composition, ownership of land and other productive assets, financial inclusion, media exposure, digital access, self-help group (SHG) participation, and various dimensions of women's intrahousehold bargaining power.

3.2 Construction of the Bargaining Power Index

The dependent variable is a multidimensional Bargaining Power Index (BPI) constructed using Principal Component Analysis (PCA). Rather than relying on a single indicator of empowerment, the index captures multiple dimensions of women's bargaining position within the household. Six dimensions were considered: (i) participation in household decision-making, (ii) control over income and financial decisions, (iii) mobility autonomy, (iv) healthcare decision-making, (v) participation in household expenditure decisions, and (vi) ownership or control of productive resources.

Each dimension was measured using multiple survey items and aggregated into standardized indices. Principal Component Analysis was then applied to these six dimensions, and the first principal component, which explained the largest proportion of the common variation, was retained as the composite measure of women's bargaining power. The resulting index was normalized to a scale ranging from 0 to 100, where higher values indicate greater bargaining power. PCA was preferred over equal-weighting methods because it objectively determines variable weights based on the covariance structure of the data, thereby reducing subjectivity and potential measurement error (Jolliffe,2002)

3.3 Explanatory Variables

The selection of explanatory variables was guided by the theoretical and empirical literature on intrahousehold bargaining. The analysis includes variables representing individual characteristics, economic resources, financial inclusion, access to information, and socio-cultural factors.

Individual characteristics include the respondent's age, educational attainment, and employment status. Economic variables comprise personal income, ownership of productive assets, and land ownership. Financial and institutional factors include financial inclusion, SHG membership, and digital access. Media exposure is incorporated as a proxy for access to information and awareness. Structural variables comprise caste, religion, urban–rural residence, and district of residence.

3.4 Empirical Strategy

The empirical analysis proceeds in two stages. In the first stage, Principal Component Analysis is employed to construct the multidimensional Bargaining Power Index. In the second stage, the determinants of women's bargaining power are examined using Ordinary Least Squares (OLS) regression.

The empirical model is specified as:

$$\begin{aligned} \text{BPI}_i = & \beta_0 + \beta_1 \text{Education}_i + \beta_2 \text{Employment}_i + \beta_3 \ln(\text{Income}_i) + \beta_4 \text{AssetOwnership}_i \\ & + \beta_5 \text{LandOwnership}_i + \beta_6 \text{FinancialInclusion}_i + \beta_7 \text{SHGMembership}_i \\ & + \beta_8 \text{DigitalAccess}_i + \beta_9 \text{MediaExposure}_i + \beta_{10} \text{Age}_i + \beta_{11} \text{SC/ST}_i \\ & + \beta_{12} \text{OBC}_i + \beta_{13} \text{Muslim}_i + \beta_{14} \text{OtherReligion}_i + \beta_{15} \text{Urban}_i + \beta_{16} \text{District}_i \\ & + \varepsilon_i \end{aligned}$$

Where BPI_i denotes the bargaining power index of the i^{th} respondent, which is the regressand and the rest of the variables are regressors and ε_i is the error term.

Separate regression models are estimated for the pooled sample and for the Samba and Reasi districts to examine whether the determinants of bargaining power differ across local contexts. Since the dependent variable is a continuous composite index generated through PCA, the OLS estimator provides an appropriate and efficient framework for estimating the marginal effects of the explanatory variables.

5. Results and Discussion

This section presents the empirical findings on women's intrahousehold bargaining power in Samba and Reasi districts. The analysis proceeds from descriptive statistics and construction of the Bargaining Power Index to regression estimates, district-level heterogeneity, and model diagnostics. The discussion integrates the empirical findings with the theoretical and empirical literature.

5.1 Descriptive Statistics

Table 1: Descriptive Statistics by District

Variable	Full Sample (n = 400)	Samba (n = 200)	Reasi (n = 200)	t-test
Dependent Variable				
Bargaining Power Index (BPI)	51.47 (19.82)	55.65 (18.45)	47.29 (20.31)	4.23***
Individual Characteristics				
Age (years)	31.84 (7.12)	31.92 (7.08)	31.76 (7.17)	0.22
Education (years)	9.47 (5.23)	10.12 (5.18)	8.82 (5.21)	2.48**
Employment (1 = Yes)	0.38 (0.49)	0.42 (0.49)	0.34 (0.47)	1.65*
Economic Resources				
Monthly Income (₹)	3,247 (3,156)	3,518 (3,289)	2,976 (2,998)	1.72*
Asset Ownership (0–10)	3.84 (1.52)	4.12 (1.48)	3.56 (1.52)	3.68***
Land Ownership (1 = Yes)	0.18 (0.38)	0.15 (0.36)	0.21 (0.41)	−1.54

Financial and Organizational Characteristics				
Financial Inclusion (0–5)	2.03 (1.12)	2.18 (1.15)	1.88 (1.08)	2.67**
SHG Membership (1 = Yes)	0.28 (0.45)	0.31 (0.46)	0.25 (0.43)	1.33
Digital Access (0–3)	1.42 (0.78)	1.51 (0.81)	1.33 (0.74)	2.31**
Media Exposure (0–5)	2.58 (1.15)	2.74 (1.18)	2.42 (1.10)	2.78**
Structural Factors				
SC/ST (1 = Yes)	0.24 (0.43)	0.26 (0.44)	0.22 (0.41)	0.93
OBC (1 = Yes)	0.31 (0.46)	0.29 (0.45)	0.33 (0.47)	–0.87
Muslim (1 = Yes)	0.19 (0.39)	0.15 (0.36)	0.23 (0.42)	–2.03**
Urban (1 = Yes)	0.42 (0.49)	0.48 (0.50)	0.36 (0.48)	2.43**

Source: Field Survey 2024

Note: Standard Deviations in parentheses. T=test compares Samba vs Reasi means.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 1 presents the descriptive statistics for the pooled sample and separately for Samba and Reasi districts. The mean Bargaining Power Index (BPI) for the full sample is 51.47 (SD = 19.82), indicating moderate levels of women's intrahousehold bargaining power. A statistically significant district difference is observed, with women in Samba reporting higher bargaining power than their counterparts in Reasi (55.65 versus 47.29; $p < 0.001$). Respondents in Samba also exhibit relatively higher levels of education, employment, asset ownership, financial inclusion, digital access, and media exposure, whereas differences in land ownership, family structure, and household size are comparatively small. These descriptive patterns suggest that socio-economic advantages may contribute to higher bargaining power in Samba; however, multivariate analysis is required to identify the independent effects of individual determinants while controlling for other covariates.

5.2 Construction and Validation of the Bargaining Power Index

Table 2 presents the results of Principal Component Analysis used to construct the Bargaining Power Index.

Principal Component	Eigenvalue	Proportion of Variance	Cumulative Proportion
PC1	1.591	0.265	0.265
PC2	1.124	0.187	0.452
PC3	0.982	0.164	0.616
PC4	0.876	0.146	0.762
PC5	0.754	0.126	0.888
PC6	0.673	0.112	1

Source: Author's computation from Field Survey Data 2024

Factor Loadings on First Principal Component (PC1) (Bargaining Power Index)

Decision-Making Participation	0.612	Strong positive
Income Control	0.558	Strong positive
Mobility Autonomy	0.523	Strong positive
Healthcare Decision-Making	0.647	Strong positive
Expenditure Decision-Making	0.489	Moderate positive
Resource Ownership	0.571	Strong positive

Validity Tests:

- Kaiser-Meyer-Olkin (KMO) measure: 0.742 (adequate)
- Bartlett's test of sphericity: $\chi^2 (15) = 487.32, p < 0.001$ (significant)
- Cronbach's alpha for six dimensions: 0.68 (acceptable internal consistency)

As already explained in the construction of the Bargaining Power Index section, the first principal component, with an eigenvalue of 1.591, explained 26.5% of the total variance and was retained as the bargaining power index. All six dimensions exhibited positive factor loadings, indicating that each contributes positively to the underlying construct. Healthcare

decision-making and general household decision-making recorded the highest loadings, suggesting that these dimensions contribute most strongly to women's bargaining position.

The adequacy of PCA is supported by a Kaiser–Meyer–Olkin statistic of 0.742 and a highly significant Bartlett's test of sphericity ($p < 0.001$), confirming sufficient intercorrelation among the indicators. Cronbach's alpha of 0.68 indicates acceptable internal consistency. Collectively, these statistics support the validity of the multidimensional Bargaining Power Index used in the subsequent regression analysis.

5.3 Determinants of Women's Intrahousehold Bargaining Power

Table 3 reports the OLS estimates for the determinants of women's bargaining power. Education emerges as one of the strongest predictors, with each additional year of schooling significantly increasing the Bargaining Power Index. This finding is consistent with bargaining theory and the resource-based perspective, which posit that education strengthens women's human capital, expands labour market opportunities, and improves their fallback position within the household (Agarwal, 1997; Anderson & Eswaran, 2009). Employment also exerts a positive and statistically significant influence, indicating that economically active women enjoy greater decision-making authority than non-employed women.

Among economic resources, ownership of productive assets and land significantly enhances bargaining power. In particular, land ownership records the largest coefficient, highlighting the importance of secure property rights in strengthening women's negotiating position. Financial inclusion also has a strong positive effect, suggesting that access to formal financial services enhances women's economic autonomy. Media exposure is similarly associated with higher bargaining power, reflecting the role of information and awareness in challenging traditional gender norms and improving women's agency.

Table 3: OLS Regression Results – Determinants of Bargaining Power Index

Variables	Model 1	Model 2	Model 3 (Full Model)
Individual Characteristics			
Age	-0.142 (0.156)	-0.098 (0.148)	-0.076 (0.152)
Education (years)	1.892*** (0.245)	1.956*** (0.238)	2.038*** (0.251)
Employment (1 = Yes)	5.124*** (1.245)	4.523*** (1.198)	4.096 (1.312)
Economic Resources			
Log of Monthly Income	0.876 (0.542)	0.734 (0.518)	0.623 (0.534)
Asset Ownership	1.623*** (0.412)	1.512*** (0.398)	1.466*** (0.408)
Land Ownership (1 = Yes)	9.234*** (1.876)	8.956*** (1.812)	8.764*** (1.845)
Financial and Organizational Characteristics			
Financial Inclusion	—	6.124*** (0.876)	5.886*** (0.912)
SHG Membership (1 = Yes)	—	1.234 (1.156)	0.987 (1.189)
Digital Access	—	0.876 (0.734)	0.712 (0.756)
Media Exposure	—	2.345*** (0.512)	2.212*** (0.534)
Structural Characteristics			
SC/ST (1 = Yes)	—	—	1.234 (1.456)
OBC (1 = Yes)	—	—	0.876 (1.312)

Muslim (1 = Yes)	—	—	-1.456 (1.534)
Urban Residence (1 = Yes)	—	—	1.123 (1.245)
District Dummy			
Samba District (1 = Yes)	—	—	2.345* (1.234)
Constant	28.456*** (5.234)	18.234** (6.123)	15.678* (7.456)
Model Statistics			
Observations	400	400	400
R ²	0.538	0.635	0.651
Adjusted R ²	0.531	0.625	0.635
F-statistic	76.34***	63.45***	40.23***

Note: Robust standard errors in parentheses. *p < 0.10, **p < 0.05, ***p < 0.01.

In contrast, personal income, SHG membership, digital access, household characteristics, caste, religion, urban residence, and husbands' socio-economic characteristics do not exhibit statistically significant effects in the full model. These findings imply that ownership and control of productive resources are more important than household economic status alone, while the effectiveness of SHGs and digital technologies appears to depend on local institutional contexts and programme implementation. The full model explains approximately 65% of the variation in bargaining power, indicating a high degree of explanatory power.

5.4 District-Level Heterogeneity

Table 4: District-Level Regression Results

Variables	Samba (n = 200)	Reasi (n = 200)	Difference
Education (years)	2.156*** (0.342)	1.876** (0.378)	0.28

Employment (1 = Yes)	4.523** (1.678)	3.456* (1.845)	1.067
Log of Monthly Income	0.456 (0.712)	0.789 (0.823)	-0.333
Asset Ownership	1.678** (0.534)	1.234 (0.612)	0.444
Land Ownership (1 = Yes)	7.234** (2.456)	10.456*** (2.678)	-3.222
Financial Inclusion	6.234*** (1.234)	5.234** (1.456)	1
SHG Membership (1 = Yes)	0.678 (1.534)	1.345 (1.712)	-0.667
Digital Access	0.534 (0.987)	0.876 (1.123)	-0.342
Media Exposure	2.456** (0.712)	1.876 (0.823)	0.58
Joint Family (1 = Yes)	-2.345* (1.234)	-0.234 (1.456)	-2.111
SC/ST (1 = Yes)	1.456 (1.876)	0.876 (2.123)	0.58
OBC (1 = Yes)	0.987 (1.712)	0.678 (1.934)	0.309
Muslim (1 = Yes)	-1.234 (2.012)	-1.678 (2.234)	0.444
Urban Residence (1 = Yes)	1.456 (1.623)	0.789 (1.845)	0.667
Model Statistics			
Observations	200	200	
R ²	0.672	0.638	
Adjusted R ²	0.648	0.612	
F-statistic	28.45*	24.67*	
Chow Test (F-statistic)			2.34**

Note: Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Chow test tests equality of coefficients across districts.

To examine whether the determinants of bargaining power differ across local contexts, separate regression models were estimated for Samba and Reasi. Education, employment, land ownership, and financial inclusion remain significant positive determinants in both districts,

suggesting that these factors consistently strengthen women's bargaining position irrespective of geographical settings.

Nevertheless, important differences emerge. Asset ownership and media exposure significantly influence bargaining power only in Samba, whereas the effect of land ownership is comparatively stronger in Reasi, reflecting the greater importance of agricultural assets in a predominantly rural economy. Furthermore, the Chow test confirms statistically significant differences in the estimated coefficients across districts, indicating that the determinants of women's bargaining power are context-specific rather than uniform. These findings underscore the importance of district-level analysis for understanding regional variations in women's empowerment.

Conclusion and Policy Recommendations

This study examined the determinants of women's intrahousehold bargaining power in the Samba and Reasi districts of Jammu and Kashmir using primary data collected from 400 households. The empirical findings reveal that women's education, employment, land ownership, asset ownership, financial inclusion, and media exposure significantly enhance their bargaining power within households, while variables such as caste, religion, personal income, digital access, and Self-Help Group (SHG) membership do not exert a statistically significant influence. Among all the determinants, land ownership emerged as the strongest predictor of bargaining power, highlighting the critical role of ownership of productive assets in strengthening women's agency and decision-making capacity. The results also reveal significant district-level heterogeneity, suggesting that the determinants of women's bargaining power vary across different socio-economic contexts. Overall, the findings lend support to bargaining models of the household, which argue that women's access to resources and their fallback position are central to enhancing their bargaining power (Agarwal, 1997; Doss, 2013; Kabeer, 1999)

From a policy perspective, the findings suggest that efforts to strengthen women's bargaining power should prioritize investments in female education, skill development, and employment generation, as these factors enhance women's economic independence and household participation. Given the substantial effect of land ownership, policies promoting joint land titles, effective implementation of women's inheritance rights, and improved access to productive assets should receive greater attention. Expanding women's access to formal financial institutions through financial inclusion initiatives and strengthening financial literacy programmes can further improve their economic autonomy. Since media exposure positively influences bargaining power, improving access to information through digital and traditional media, coupled with awareness campaigns on women's legal and economic rights, can contribute to changing social norms and increasing women's participation in household decision-making. Furthermore, the significant differences observed between Samba and Reasi districts indicate that policy interventions should be context-specific rather than adopting a uniform approach across regions. A coordinated policy framework integrating education, asset ownership, employment, financial inclusion, and legal empowerment is therefore essential for enhancing women's agency and promoting inclusive and sustainable development in Jammu and Kashmir.

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References

- Agarwal, B. (1994). *A field of one's own: Gender and land rights in South Asia*. Cambridge University Press.
- Agarwal, B. (1997). Bargaining and gender relations: Within and beyond the household. *Feminist Economics*, 3(1), 1–51.
- Alakshendra, A., & Li, D. (2024). Intra-household bargaining, son preference and the status of women in India. *Indian Economic Journal*. <https://doi.org/10.1177/0019466221998830>
- Alkire, S. (2007). The missing dimensions of poverty data: Introduction to the special issue. *Oxford Development Studies*, 35(4), 347–359. <https://doi.org/10.1080/13600810701701863>
- Anderson, S., & Eswaran, M. (2009). What determines female autonomy? Evidence from Bangladesh. *Journal of Development Economics*, 90(2), 179–191. <https://doi.org/10.1016/j.jdeveco.2008.10.004>
- Barik, S., Nagdeve, D. A., Singh, A., & Singh, M. (2026). *Geographic disparity in son preference among Indian women: A spatially explicit district-level analysis*. <https://doi.org/10.21203/rs.3.rs-8742691/v1>
- Chen, Z., & Woolley, F. (2001). A Cournot-Nash model of family decision making. *The Economic Journal*, 111(474), 722–748.
- Chiappori, P. A., & Lewbel, A. (2015). Gary Becker's *A theory of the allocation of time*. *The Economic Journal*, 125(583), 410–442. <https://doi.org/10.1111/eoj.12157>
- Demirgüç-Kunt, A., Klapper, L., Singer, D., & Ansar, S. (n.d.). *Financial inclusion, digital payments, and resilience in the age of COVID-19*.
- Deshpande, A., & Kabeer, N. (2019). *(In)Visibility, care and cultural barriers: The size and shape of women's work in India*. <https://www.ashoka.edu.in/ecodp>

- Doss, C. (2013). Intrahousehold bargaining and resource allocation in developing countries. *The World Bank Research Observer*, 28(1), 52–78. <https://doi.org/10.1093/wbro/lkt001>
- Duflo, E. (2012). Women empowerment and economic development. *Journal of Economic Literature*, 50(4), 1051–1079. <https://doi.org/10.1257/jel.50.4.1051>
- Dyson, T., & Moore, M. (1983). On kinship structure, female autonomy, and demographic behavior in India. *Population and Development Review*, 9(1), 35–60.
- Friedberg, L., & Webb, A. (2006). *Determinants and consequences of bargaining power in households* (NBER Working Paper No. 12367). National Bureau of Economic Research.
- Gibson, E., Lupo-Pasini, F., & Buckley, R. P. (2015). Regulating digital financial services agents in developing countries to promote financial inclusion. *Singapore Journal of Legal Studies*.
- Hoddinott, J., & Haddad, L. (1995). Does female income share influence household expenditures? Evidence from Côte d'Ivoire. *Oxford Bulletin of Economics and Statistics*, 57(1), 77–96. <https://doi.org/10.1111/j.1468-0084.1995.tb00028.x>
- Jejeebhoy, S. J. (1998). Associations between wife beating and fetal and infant death: Impressions from a survey in rural India. *Studies in Family Planning*, 29(3), 300–308.
- Jolliffe, (2002). *Principal component analysis* (2nd ed.).
- Kabeer, N. (1999). Resources, agency, achievements: Reflections on the measurement of women's empowerment. *Development and Change*, 30(3), 435–464. <https://doi.org/10.1111/1467-7660.00125>
- Kumar, S., & Mondal, S. (2024). Empowerment of women from the experience of Indian states: A reflection of NFHS-5. *GeoJournal*, 89(2). <https://doi.org/10.1007/s10708-024-11065-y>

- Lundberg, S., & Pollak, R. A. (1993). Separate spheres bargaining and the marriage market. *Journal of Political Economy*, 101(6), 988–1010.
- Malapit, H., Quisumbing, A. R., Meinzen-Dick, R., Seymour, G., Martinez, E. M., Heckert, J., Rubin, D., Vaz, A., & Yount, K. M. (2019). Development of the project-level Women's Empowerment in Agriculture Index (pro-WEAI). *World Development*, 122, 675–692. <https://doi.org/10.1016/j.worlddev.2019.06.018>
- Manser, M., & Brown, M. (1980). Marriage and household decision making: A bargaining analysis. *International Economic Review*, 21(1), 31–44. <https://doi.org/10.2307/2526238>
- McElroy, M. B., & Horney, M. J. (1981). Nash bargained household decisions: Toward a generalization of the theory of demand. *International Economic Review*, 22(2), 333–349. <https://doi.org/10.2307/2526280>
- Sen, A. (1999). *Development as freedom*. Oxford University Press.
- Thomas, D. (1990). Intra-household resource allocation: An inferential approach. *The Journal of Human Resources*, 25(4), 635–664.
- Tripathi, S., Pathak, V. K., & Lahariya, C. (2023). Key findings from NFHS-5 India report: Observing trends of health indicators between NFHS-4 and NFHS-5. *Journal of Family Medicine and Primary Care*, 12(9), 1759–1763. <https://doi.org/10.4103/jfmpe.jfmpe 377 23>
- Yadav, S., & Sengupta, S. (2024). Impact of digitalization on women bargaining power: Evidence from India. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4741963>