International Business & Economics Studies
ISSN 2640-9852 (Print) ISSN 2640-9860 (Online)
Vol. 8, No. 4, 2026
www.scholink.org/ojs/index.php/ibes

Original Paper

Digital Gig Work and Intrahousehold Bargaining Power: The Effects of Women's Platform Employment on Housework Division and Childcare Investment

Jiayu Guo[1,*]

[1] Guangxi Normal University, Guilin, Guangxi, China

Received: September 27, 2026 Accepted: October 28, 2026 Online Published: November 18, 2026

doi:10.22158/ibes.v8n4p180 URL: http://dx.doi.org/10.22158/ibes.v8n4p180

Abstract

Digital gig work gives married women a low-entry, flexible income stream paid directly into personal accounts, yet its effect on intrahousehold power remains untested. Embedding platform gig work in Chiappori's collective household model, this paper uses five waves of the China Family Panel Studies (2014-2022) and instruments county digital finance with the interaction between 1984 post-office density and national digital-economy development. Gig participation raises the wife's bargaining index by 0.317 standard deviations and the husband's weekly housework by 0.141 hours; Oster stability and Rosenbaum bounds support both effects. Mediation shows that the wife's income share fully mediates the bargaining effect, whereas income level explains 65%, leaving a 37-percentage-point gap attributable to the structural independence of income. Effects on bargaining are larger among less educated women, while behavioral responses differ by region and age. The negative OLS association with maternal coresidence does not survive instrumental-variable, matching, or sensitivity checks and is reported as descriptive only. The findings show how labor-market change can reshape power inside the household.

Keywords

digital gig economy, intrahousehold bargaining, gender division of labor, housework time, maternal coresidence

1. Introduction

Technological change has repeatedly reshaped the family, and each episode has carried distinct welfare consequences. The washing machine released women from routine household production and raised their labor-force participation [1]; oral contraceptives delayed marriage and childbearing and increased

the returns to women's human capital [2]. In both cases, however, technology operated on the household-production side or on fertility timing rather than on the structure of women's participation in the labor market. Digital gig work differs in this respect. It creates a low-entry, high-flexibility, and spatially decentralized channel through which married women can earn income paid directly into a personal account [3]. By the end of 2025, China had more than 200 million flexible workers, nearly 40% of them women. Yet the basic pattern in which wives spend 2.6 times as many hours on housework as their husbands has barely changed over the past two decades [4,5]. The coexistence of rapid entry into a new employment form with a rigid gender division of labor raises a question with clear theoretical stakes: when wives obtain an income source independent of their husbands' control, does power inside the household shift?

This question bears on a long-standing dispute in family economics. Becker's unitary model predicts that, holding total household income constant, the distribution of income among members should not affect household decisions [6]. Bargaining and collective models predict the opposite: who controls income, rather than how much income the household has, determines the equilibrium position on the Pareto frontier [7,8,9,10]. Lundberg, Pollak, and Wales provided influential causal evidence for the latter view by exploiting the reassignment of the United Kingdom child benefit from fathers to mothers [11]. Subsequent work has followed a common strategy—find an exogenous shock and identify its bargaining effect—using divorce-law reform [12], inheritance-law reform [13], and pension reform [14]. This literature establishes a causal chain running from shocks to threat points, from threat points to Pareto weights, and from Pareto weights to resource allocation. Almost all of the shocks used, however, originate in public policy.

The defining feature of digital gig work is not the level of pay but the structural independence of the income source. Existing studies of the gig economy in China have largely remained on the labor-market side, documenting how flexible insecurity compresses women's wages [15]. Studies that examine household outcomes usually treat women as consumers of digital services: Zhang, Yang, and Tan find that, on average, the digital economy reinforces the traditional division in which men specialize in market work and women in home work [16]. Whether this conclusion survives when women become producers rather than consumers is an open question. Li and Tian identify three channels—gender-egalitarian attitudes, human capital, and labor participation—through which the digital economy affects married women's bargaining power, but they do not separate the level of income from the structure of its source [17]. Evidence from Bangladesh is suggestive: only income earned independently of the husband's farm raises women's autonomy [18]. Bertrand, Kamenica, and Pan show that deviations from the normative income ratio trigger gender-identity repair, implying that changes in income structure exert causal pressure on household behavior [19]. That pressure may vary with the identity signal attached to the employment form—precisely the margin on which gig work differs from formal employment.

These strands leave a gap. Digital gig work is market-driven, carries a weak identity signal, and is

organized around income-source independence. Its causal effect on intrahousehold bargaining and the gender division of labor—and whether that effect exists independently of the level of income—has not been rigorously tested.

This paper makes three contributions. Theoretically, it decomposes the mediating effect to quantify the relative contributions of income-source independence and income level, providing causal evidence from the digital economy for the hypothesis advanced by Anderson and Eswaran [18]. Empirically, it constructs an external instrument from historical post-office density and combines it with Oster coefficient-stability tests and Rosenbaum sensitivity analysis, yielding evidence from multiple angles [20,21]. For policy, the results imply that lowering institutional barriers to flexible female employment yields returns that extend beyond labor-market efficiency to the reorganization of power within the household.

The remainder of the paper proceeds as follows. Section 2 develops the theoretical framework and hypotheses. Section 3 describes the data, variables, and econometric specification. Section 4 reports baseline and robustness results. Section 5 examines mechanisms and heterogeneity. Section 6 concludes.

2. Theoretical Analysis and Hypotheses

2.1 Theoretical Background

The starting point for theories of intrahousehold allocation is the new home economics founded by Becker [6,22]. Becker treats the household as a single decision unit headed by an altruistic parent whose behavior is equivalent to that of a rational individual maximizing joint utility. Two empirical regularities challenge this framework. Gronau shows that even after controlling for market wage differences, married women's housework hours systematically exceed their husbands' [23]. This gendered division of housework is stable across cultures and periods [4,24,25], although its pace of change has varied [26], and perceptual gaps between spouses can persist even when housework is ostensibly shared [27]. The more damaging challenge comes from the failure of the income-pooling assumption. Lundberg, Pollak, and Wales exploit the transfer of the UK child benefit from fathers to mothers and find that the same amount of income, when controlled by the wife, shifts household consumption systematically [11]. Thomas in Brazil and Duflo in South Africa report consistent results [14,28]. In China, Zou and Yin use household finance data to show that a one-percentage-point increase in women's bargaining power reduces household saving by 0.271% and significantly raises education spending [29]. The cross-national evidence points to one conclusion: household decisions are not driven by a unified preference function but are the equilibrium of a game among members with endogenous relative bargaining power.

Manser and Brown and McElroy and Horney introduce Nash cooperative bargaining into marriage decisions [7,8]. Their central insight is that cooperation generates a Pareto improvement over singlehood, but the division of the cooperative surplus depends on the strength of each member's threat

point. Lundberg and Pollak propose a separate-spheres model that is closer to institutional reality: the relevant threat point is not divorce but reversion to a non-cooperative equilibrium governed by traditional gender-role norms [30]. This formulation gives gender-role norms direct economic content and is supported by Chinese evidence from matched CFPS couples: when spouses hold consistent and relatively modern views of gender roles, wives' housework time falls and husbands' rises [5]. Anderson and Eswaran provide a more direct test using Bangladeshi data: only income from independent employment outside the husband's farm raises women's autonomy [18]. Chiappori develops the collective household model, deriving testable predictions from the minimal assumption of Pareto efficiency: any exogenous improvement in one member's threat point should alter intrahousehold allocation through an adjustment in the Pareto weight μ [9,10]. Extensions incorporate children and marriage-market conditions [31,32,33]. Lu, Zhang, and He provide Chinese evidence using the New Marriage Law: by weakening married women's threat points through changes in property rights, the reform significantly raised their probability of labor-force participation [12].

2.2 The Bargaining Shock of Digital Gig Work

The exogenous shocks used in this literature are almost entirely public-policy interventions: child-benefit reform [11], inheritance-law reform [13], pension reform [14], and marriage-law reform [12]. These shocks are top-down, one-off, and designed by institutions. The rise of digital gig work offers a shock of a different kind—market-driven technological change. According to China's National Information Center, the country had more than 200 million flexible workers, nearly 40% of them women. Wang, Le, and Zhang use CFPS data to show that the digital economy significantly raises married women's labor-force participation [3]. Wang further finds that the platform economy narrows the gender employment gap [34]. Chen and Xie reach similar conclusions from the perspective of gender differences in employment [35], and Li documents the heterogeneous employment effects of digitalization across gender [36]. Local digital-economy development also weakens out-migration and encourages return [37].

Three structural features distinguish digital gig work from traditional employment. First, entry barriers are low: a smartphone and basic operating skills suffice, in contrast to the credential screening and occupational licensing that characterize formal jobs. Second, temporal and spatial flexibility is high: workers choose when and where to work, which resonates with Goldin's argument that temporal flexibility is the last chapter of gender convergence [38]. Part-time work can also raise job satisfaction and family happiness when it matches preferences [39]. Third, remuneration is paid directly into a personal account, so husbands' information about and control over the income stream are weaker than under a traditional wage. In this respect, gig pay resembles the child benefit paid directly to mothers in Lundberg, Pollak, and Wales [11].

These features operate through three logically distinct channels. The first is a fixed-cost effect. Cogan shows that fixed participation costs make married women's labor-supply elasticity much larger on the participation margin than on the hours margin: many women stay out of the labor market not because

the market wage is below their reservation wage but because fixed costs make the net return negative at the point of entry [40]. Gig work reduces commuting and fixed scheduling costs almost to zero, allowing previously excluded women to earn independent monetary income. Li and Tian identify a similar participation channel but do not separate income levels from income sources [17]. The second channel is income-source independence. Anderson and Eswaran's finding that where income comes from matters more than how much income there is acquires a new expression in the gig context [18]. Wu shows that maternal employment raises fathers' relative childcare time and the probability of becoming a nighttime caregiver, although the mechanism is closer to a time-constraint effect than to a bargaining effect [41]. The third channel is the loosening of gender-role norms. Akerlof and Kranton introduce social identity into the utility function [42], and Bertrand, Kamenica, and Pan document gender-identity repair [19]. In China, Qing finds that a more egalitarian division of housework significantly affects women's fertility intentions [43], and Wen's digital ethnography of Douyin shows that digital labor is becoming familialized: couples jointly operate accounts, blurring the boundary between market work and household activity and loosening rigid norms [44]. Liu's evidence on precarious work and gender attitudes suggests that employment form itself conditions how housework is divided [45].

2.3 Research Hypotheses

Digital gig work raises wives' outside options through these three channels. In Chiappori's collective model, an exogenous increase in the reservation utility shifts the Pareto weight μ toward the wife and triggers adjustments in intrahousehold allocation [10]. The adjustment need not be uniform across dimensions; its strength and institutional sensitivity differ. The following subsections derive hypotheses for bargaining power, housework, and maternal coresidence.

Bargaining power

An increase in μ should appear first and most directly in control over income. Anderson and Eswaran show that independent non-farm income affects women's autonomy far more than household agricultural income, establishing income-source independence as a core dimension of bargaining power [18]. Lundberg, Pollak, and Wales provide parallel evidence from a developed country: the same income, paid to mothers rather than delivered through fathers' tax relief, significantly changes consumption patterns [11]. In China, Zou and Yin find that the channels through which women's bargaining power rises are heterogeneous—effects are stronger among highly educated women, urban households, and the eastern region—implying that initial conditions moderate empowerment [29]. Digital gig work adds a dimension that these studies do not capture. Because platform pay goes directly into a personal account, the husband's information about and control over the income stream are weaker than under a traditional wage. This structural transfer of income control exists independently of the income level. Zhang, Yang, and Tan find that the digital economy reinforces the traditional division when women are consumers [16]; when women become producers, the direction may reverse. Hence:

Hypothesis 1. Wife's participation in digital gig work significantly increases her intrahousehold

bargaining power.

Housework division

A higher μ gives the wife a stronger exit threat and allows her to reduce her contribution to housework, which is a household public good. To maintain the supply of that good, the husband must increase his participation. Existing evidence provides indirect support. Liu, Luo, and Jiang find that a consistent modernization of spouses' gender attitudes is a key condition for husbands to do more housework, implying that adjustment requires not only a change in economic resources (a higher μ) but also a shift in norms [5]. Zhang, Yang, and Tan find that the digital economy reinforces the traditional division on average [16], but among gig participants the labor-market vulnerability documented by Xie, Jiang, and Kuang may be partly offset by bargaining gains inside the household [15]. The adjustment in husbands' housework should be smaller and less statistically robust than the change in bargaining power itself. Bertrand, Kamenica, and Pan's identity-repair hypothesis provides a microfoundation: when the wife's relative income rises, the husband may compensate by maintaining traditional roles in other domains, such as childcare [19]. Housework reallocation therefore faces greater institutional friction than bargaining power. Hence:

Hypothesis 2. Wife's participation in digital gig work significantly increases the husband's housework hours.

Maternal coresidence

Unlike housework, the effect on months of maternal coresidence is theoretically ambiguous: an income effect and a substitution effect pull in opposite directions. On the income-effect side, gig work allows women to participate in the labor market locally rather than migrating, removing family separation caused by commuting and migration; gig income can also purchase market-based substitute care, extending the time mother and child live together. On the substitution-effect side, gig labor supply crowds out family care time. Wu finds that maternal employment raises the probability that fathers become nighttime caregivers by a factor of 4.26, but fathers' absolute childcare time does not increase: mothers' additional labor supply is not fully absorbed by spouses and is partly transferred to grandparents [41]. In rural China, the substitution effect is likely to dominate. Xu finds that the more educated women are, the more unequal the division of childcare becomes—highly educated women hold higher expectations for their children and are more committed to intensive parenting, but their labor-supply elasticity is also greater, producing sharper time conflicts [46]. Gig work offers temporal and spatial flexibility, but its implicit cost of being on call—unpaid online waiting time—may systematically compress maternal presence. In rural areas where market-based substitute care is scarce, intergenerational care by grandparents is typically triggered automatically when the mother leaves, and co-residence falls. Fertility and parenting research further shows that housework and childcare arrangements are closely linked to fertility behavior and child development [47,48]. Hence:

Hypothesis 3. Wife's participation in digital gig work significantly reduces the months of maternal coresidence.

3. Research design

3.1 Econometric Specification

To test the effects of digital gig work on intrahousehold bargaining, the division of housework, and maternal coresidence, I estimate the following baseline model:

$$Y_{it} = \alpha + \beta \cdot PlatformGig_{it} + \gamma \cdot X_{it} + \delta_p + \theta_t + \varepsilon_{it} \quad (1)$$

where Y_{it} is the dependent variable—the bargaining index (BargainIndex), the husband's housework hours (HusbHHWork), or months of maternal coresidence (MomCoreside); $PlatformGig_{it}$ is the key explanatory variable, indicating whether wife i engaged in digital gig work in year t; X_{it} is a vector of controls including the wife's age and its square, the wife's years of schooling, the husband's age and its square, the husband's years of schooling, and rural status; δ_p and θ_t are province and year fixed effects that absorb regional institutional differences and macro time trends; and ε_{it} is the error term. Standard errors are clustered at the province level.

To examine the channels through which gig work affects bargaining power, I estimate the following mediation model:

$$M_{it} = \alpha + a \cdot PlatformGig_{it} + \gamma \cdot X_{it} + \delta_p + \theta_t + \varepsilon_{it} \quad (2)$$

$$Y_{it} = \alpha + c' \cdot PlatformGig_{it} + b \cdot M_{it} + \gamma \cdot X_{it} + \delta_p + \theta_t + \varepsilon_{it} \quad (3)$$

where M_{it} is the mediating variable (the wife's income share or log income), a is the effect of gig work on the mediator, b is the effect of the mediator on the outcome, and c′ is the direct effect of gig work once the mediator is included.

3.2 Data

The data come from the China Family Panel Studies (CFPS), a nationwide, large-scale, multidisciplinary longitudinal survey administered by the Institute of Social Science Survey at Peking University. CFPS covers 25 provinces, autonomous regions, and municipalities and collects information at the individual, household, and community levels on economic, social, demographic, educational, and health outcomes. I use five waves—2014, 2016, 2018, 2020, and 2022—which form an unbalanced panel spanning ten years.

The sample is constructed in four steps. First, I pool the adult questionnaires across waves and retain married women aged 20-55 who are married or cohabiting. Second, I match husbands' information using the household identifier (fid) and the spousal relationship variable. Third, I merge household income and consumption data from the household questionnaire. Fourth, I match the child proxy questionnaire to obtain months of maternal coresidence.

3.3 Variables

Dependent variables

The bargaining index (BargainIndex) is an empirical proxy for the unobserved Pareto weight in Chiappori's collective model [10]. Following the literature on measuring empowerment [49], I construct it as an equal-weight sum of four standardized dimensions: (i) the wife's income share (WifeIncShare), which captures the structural distribution of income control; (ii) one minus the wife's

share of housework, which captures equality in the division of housework; (iii) the female share of household consumption, which captures the weight of the wife's preferences in consumption; and (iv) subjective social status, which captures non-economic signals of bargaining power. Each dimension is standardized to a z-score with mean zero and standard deviation one, and the four are summed with equal weights. Higher values indicate greater bargaining power.

The husband's housework time (HusbHHWork) is the husband's self-reported weekly hours of housework in the CFPS adult questionnaire. It directly measures gender equality in the division of housework and is the core behavioral proxy for the exit-threat channel.

Months of maternal coresidence (MomCoreside) comes from the CFPS child proxy questionnaire: the number of months in the past 12 months that the child lived with the mother (variable wb402), ranging from 0 to 12. It captures the extensive margin of childcare investment—whether the mother is present—rather than the intensive margin of hours per day. In rural China, where roughly nine million children are left behind, the extensive margin is the baseline condition for childcare investment. Compared with adult self-reports, the child proxy questionnaire is answered by a third party (the child's main caregiver), which reduces measurement error and has a substantially lower missing rate.

Independent variable

CFPS does not directly ask whether respondents perform digital gig work. Following Xie, Jiang, and Kuang, I identify platform gig employment using two dimensions: contract type and method of pay [15]. A married employed woman is coded as 1 if she satisfies any of the following: (i) she is a non-agricultural casual worker (jobclass = 5); (ii) she is self-employed (jobclass = 2), uses the internet (wife_internet = 1), and is paid by piece, hour, day, or commission; or (iii) she is an employee (jobclass = 4), has no fixed workplace, and is paid by piece, hour, day, or commission. She is coded as 0 if none of these conditions holds or if she is not currently working (employ ≠ 1). The logic is that gig work is distinguished from traditional employment by the structural independence of the income source (direct payment to a personal account) and by flexible employment arrangements (no fixed wage or workplace), not by industry. This approach follows international efforts to measure platform and alternative work arrangements [50,51,52,53].

Mediating variables

The wife's income share (WifeIncShare) is the ratio of the wife's annual income to the sum of the couple's annual incomes, in [0,1]. It captures the structural distribution of income control and is the core proxy for income-source independence. Because platform pay is deposited directly into women's personal accounts, husbands have less control over this income stream than over a traditional wage; an increase in the income share reflects this structural change in where income comes from.

The wife's log income (LnWifeInc) is the natural logarithm of the wife's annual income plus one. It captures the level of income and is the core proxy for the fixed-cost channel: gig work lowers the fixed cost of participation ($F \rightarrow 0$), allowing previously excluded women to earn independent monetary income.

Control variables

To mitigate omitted-variable bias, all regressions control for the wife's age and its square, the wife's years of schooling, the husband's age and its square, the husband's years of schooling, and rural status (rural = 1, urban = 0). The age terms capture nonlinear life-cycle changes in labor supply and housework; education controls for the systematic effect of human capital on bargaining and employment; the husband's characteristics enter symmetrically; and rural status absorbs differences in labor-market structure, gender norms, and the availability of substitute care. All models include province and year fixed effects. All continuous variables are winsorized at the 1st and 99th percentiles.

Table 1. Variable Definitions and Descriptive Statistics

Variable type	Variable	Definition	N	Mean	SD
Dependent variables	Bargaining index	Equal-weight sum of four standardized components: wife's income share, one minus wife's housework share, female consumption share, and subjective social status	10,333	0.990	1.967
	Husband's housework time	Husband's self-reported weekly housework hours	29,642	9.116	2.224
	Months of maternal coresidence	Months the child lived with the mother in the past 12 months (0-12)	20,228	7.739	4.730
Independent variable	Platform gig employment	Binary indicator of platform gig work (1 = yes)	31,692	0.025	0.156
Mediating variables	Wife's annual income (yuan)	Wife's annual income in yuan	14,506	7,247	4,531
	Wife's income share	Wife's income / (wife's + husband's income + 1), in [0,1]	11,025	0.317	0.279
Control variables	Wife's age	Age in survey year (years)	31,687	39.599	9.264
	Wife's education	Completed years of schooling	27,877	8.248	4.676
	Husband's age	Age in survey year (years)	-	42.256	8.597
	Husband's education	Completed years of schooling	-	9.222	3.925
	Rural	1 = agricultural hukou; 0 = non-agricultural hukou	23,165	0.797	0.402
	Household income (log)	ln(household net income + 1)	30,248	11.066	0.844

Note. N = observations. The bargaining index is the equal-weight sum of four z-scored components. LnWifeInc, used in the mediation analysis, equals ln(wife's annual income + 1); Table 1 reports income in yuan. The platform gig employment rate is 2.5%.

4. Empirical Results

4.1 Baseline Results

Table 2 reports the baseline estimates. Column (1) uses the bargaining index as the dependent variable; column (2) uses the husband's weekly housework hours; column (3) uses months of maternal coresidence. All specifications include the full set of controls and province and year fixed effects, with standard errors clustered at the province level.

In column (1), the coefficient on platform gig employment is 0.317 and is significant at the 1% level (t = 3.17). Gig participation thus raises the wife's bargaining index by 0.317 standard deviations. The structural change in income control translates into a multidimensional gain in bargaining power, supporting Hypothesis 1.

In column (2), the coefficient is 0.141 and is significant at the 5% level (t = 2.17). A wife's gig participation increases her husband's housework by about 0.14 hours per week, or roughly 1.5% of the sample mean of 9.1 hours. The direction contrasts with the average effect of the digital economy reported by Zhang, Yang, and Tan, who find that digitalization reinforces the traditional division [16]. When women move from consumers to producers of digital services, the direction of adjustment reverses, supporting Hypothesis 2.

In column (3), the coefficient is -0.680 and is significant at the 1% level (t = -2.77). Gig participation reduces months of maternal coresidence by about 0.68 months, or 8.8% of the sample mean of 7.74 months. The negative sign suggests that, under the rural Chinese constraint of scarce market-based substitute care, the substitution effect of gig work on mothers' labor supply outweighs the income effect. This is consistent with the theoretically ambiguous prediction in Hypothesis 3, but its causal robustness must be assessed by the endogeneity tests below.

Table 2. Baseline Regression Results

Variable	(1) Bargaining index	(2) Husband's housework time	(3) Months of maternal coresidence
Platform gig employment	0.317***	0.141**	-0.680***
	(3.17)	(2.17)	(-2.77)
Controls	Yes	Yes	Yes
Province FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	7,847	18,062	12,198
R^2	0.044	0.194	0.658

Note: All specifications include the full set of controls and province and year fixed effects. Standard errors are clustered at the province level; t-statistics are in parentheses. Specifications without fixed effects yield 0.311 (t = 2.94), 0.516 (t = 6.85), and 0.721 (t = 3.13), respectively. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

4.2 Robustness Checks

I test the robustness of the baseline results along three dimensions: alternative measurement of the dependent variable, changes in sample composition, and alternative model specifications.

Alternative measure of the dependent variable

The husband's housework time enters the baseline in levels and is right-skewed. Table 3 replaces it with ln(housework + 1). The coefficient on gig employment is 0.015 and significant at the 5% level (t = 2.42), and the sign is unchanged. The t-statistic rises from 2.17 in the baseline to 2.42, indicating that the marginal significance in the baseline was partly due to the right skew of the housework distribution. Across the four columns of Table 3, the coefficient on gig employment remains significant at the 5% level or better.

Table 3. Robustness Check: Alternative Measure of the Dependent Variable

Variable	(1) Wife's income share	(2) Bargaining index	(3) ln(Husband's housework + 1)	(4) Months of maternal coresidence
Platform gig employment	0.089***	0.317***	0.015**	-0.680***
	(8.04)	(3.17)	(2.42)	(-2.77)
Controls	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	8,358	7,847	18,062	12,198
R^2	0.191	0.046	0.188	0.658

Note: The dependent variable in column (3) is the log of the husband's weekly housework hours plus one. All specifications include controls and province and year fixed effects. Standard errors are clustered at the province level. *** p < 0.01, ** p < 0.05, * p < 0.1.

Excluding agricultural workers

Self-employed agricultural workers (jobclass = 3) have an income structure characterized by agricultural self-employment and non-wage income, which differs fundamentally from gig work. Table 4 reports estimates excluding this group. The coefficient on gig employment remains significant at the 5% level or better in all four columns, and its magnitude is almost identical to the baseline, indicating that agricultural workers do not confound the core results.

Table 4. Robustness Check: Excluding Agricultural Workers

Variable	(1) Wife's income share	(2) Bargaining index	(3) Husband's housework time	(4) Months of maternal coresidence
Platform gig employment	0.089***	0.319***	0.0143**	-0.680***
	(8.08)	(3.16)	(2.21)	(-2.76)
Controls	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	8,296	7,792	17,967	12,136
R^2	0.195	0.047	0.193	0.659

Note: The sample excludes self-employed agricultural workers (jobclass = 3). All specifications include controls and province and year fixed effects. Standard errors are clustered at the province level. *** p < 0.01, ** p < 0.05, * p < 0.1.

Excluding municipalities

Beijing, Shanghai, Tianjin, and Chongqing differ from other provinces in economic development, labor-market structure, and platform-economy penetration and may exert atypical influence on the estimates. Table 5 excludes these four municipalities. The coefficients remain significant at the 5% level or better in all four columns, and the core conclusions are unchanged.

Table 5. Robustness Check: Excluding Municipalities

Variable	(1) Wife's income share	(2) Bargaining index	(3) Husband's housework time	(4) Months of maternal coresidence
Platform gig employment	0.090***	0.353***	0.0146**	-0.681***
	(7.68)	(3.48)	(2.19)	(-2.68)
Controls	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	7,683	7,218	16,921	11,578
R^2	0.191	0.044	0.176	0.649

Note: The sample excludes Beijing, Shanghai, Tianjin, and Chongqing. All specifications include controls and province and year fixed effects. Standard errors are clustered at the province level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Endogeneity

A potential threat to the baseline estimates is the endogeneity of gig participation: whether a wife engages in gig work may itself be the result of intrahousehold bargaining, or unobserved household economic shocks may jointly drive gig participation and bargaining outcomes. I first tried the instrument strategies commonly used in the literature—distance from the county to the provincial capital, 1984 fixed-telephone and post-office density, and the township average of county gig participation—but all were weak in the first stage for individual gig participation (joint $F < 10$). I therefore move the unit of identification up one level and estimate the upstream causal effect of county digital-economy development on household bargaining. The instrument is hist_post, the interaction between 1984 post-office density per 10,000 population and the national digital-economy index, which instruments county digital-finance development (digi_index_county), measured following Han, Wang, and He [54].

The economic logic rests on the geographical persistence of infrastructure. Post-office density in 1984 captures a region's infrastructure access and factor-mobility potential at the beginning of reform and opening. Through path dependence, this historical endowment shaped subsequent

information-infrastructure layout and digital-finance penetration, but it is not directly related to current household bargaining decisions, satisfying the exclusion restriction. Unlike contemporaneous digital-economy development, which may be endogenous to household bargaining, 1984 post-office density predates the gig economy by decades. The use of a historical endowment interacted with a national shift term follows the shift-share (Bartik) tradition [55,56]; as with any instrument, the exclusion restriction is ultimately untestable [57].

Table 6 reports the two-stage estimates. In the first stage, the coefficient on hist_post is positive and significant at the 1% level (t = 4.46). The Kleibergen-Paap rk Wald F statistic is 19.89, above the Stock-Yogo 10% critical value of 16.38, rejecting the weak-instrument concern [58]. Because province fixed effects are nearly constant within a prefecture and can make the clustered covariance matrix singular, I replace province fixed effects with four macro-region fixed effects (East, Central, West, Northeast) and cluster standard errors at the prefecture level.

In the second stage, the coefficient of county digital finance on the bargaining index is 0.011 and is significant at the 10% level (t = 1.71, p = 0.086), with the same sign as the baseline. The Anderson-Rubin weak-instrument-robust test yields p = 0.147, cautioning against a strong interpretation of this marginal effect. A wild cluster bootstrap (Rademacher weights, 999 replications) yields p = 0.110 under macro-region fixed effects and p = 0.062 under province fixed effects, again indicating marginal significance. The coefficient on the husband's housework time is -0.047 (t = -5.14, $p < 0.001$), and the coefficient on months of maternal coresidence is 0.022 (t = 3.70, $p < 0.001$). The significance and signs of the two behavioral outcomes are sensitive to the fixed-effects specification.

The regional IV estimates and the individual OLS estimates have opposite signs for the behavioral outcomes: OLS finds that gig participation is positively associated with the husband's housework and negatively associated with maternal coresidence, whereas the IV estimates imply that county digital-economy development reduces the husband's housework and increases maternal coresidence. The difference has a clear economic interpretation. County digital development affects all married women, including non-participants, and its average effect is consistent with Zhang, Yang, and Tan's finding that the digital economy reinforces the traditional division [16]. The positive individual-level OLS effect of gig participation may reflect positive selection: women with more modern gender attitudes are more likely to enter gig work. The individual participation effect and the regional average effect are therefore different causal parameters and need not coincide. This also means that the individual-level behavioral effects lack clean causal support.

Given these identification limits, I apply two robustness methods that do not rely on instruments. First, Oster's coefficient-stability approach bounds the treatment effect after allowing for unobservable selection of the same strength as observable controls ($R_{max} = 1.3 \times R^2$) [20]. Second, Rosenbaum's sensitivity analysis estimates the critical odds ratio Γ at which the conclusion would fail under unobserved confounding [21]. For the bargaining index, $|\delta^*|$ is 15.5 (the coefficient rises rather than falls when controls are added) and Γ^* is 1.14, indicating strong robustness. For the husband's

housework time, |δ*| = 1.00 and Γ* = 1.21, indicating moderate robustness. For months of maternal coresidence, |δ*| is only 0.16 and Γ* is 1.05, and the propensity-score-matching ATT has the opposite sign (+0.53); the negative effect is therefore easily overturned by unobserved selection and lacks a robust causal interpretation. I also considered heteroskedasticity-based identification [59], but the resulting estimates were imprecise and are not reported.

Taken together, the core causal conclusion—that gig participation significantly raises wives' bargaining power—is supported in the same direction by the county-level IV, the Oster stability test, and the Rosenbaum sensitivity analysis. The housework effect receives moderate support. The negative coresidence effect is not robust across IV, matching, and sensitivity analyses; I therefore do not treat it as a causal conclusion and retain it only as a descriptive association.

Table 6. Instrumental-variable Estimates

Variable	First stage: county digital finance	Second stage: Bargaining index	Second stage: Husband's housework time	Second stage: Months of maternal coresidence
hist_post	0.0003***			
	(4.46)			
County digital finance		0.011*	-0.047***	0.022***
		(1.71)	(-5.14)	(3.70)
Controls	Yes	Yes	Yes	Yes
Macro-region FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
KP rk Wald F	19.89			
Observations	-	4,083	9,515	6,374
R^2	-	0.042	0.119	0.650

Note: hist_post is the interaction between 1984 post-office density per 10,000 population and the log national digital-economy index. The first stage regresses county digital-finance development on hist_post; the second stage uses county digital finance as the explanatory variable. Standard errors are clustered at the prefecture level. The Kleibergen-Paap rk Wald F statistic of 19.89 exceeds the Stock-Yogo 10% critical value of 16.38. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

5. Mechanism Analysis

5.1 Mediation Analysis

Table 7 reports the mediation results for the bargaining index. Column (1) reproduces the total effect of 0.317 (t = 3.17). Column (2) adds the wife's income share to test the income-structure channel. The mediated share is 102.1%, indicating that the wife's income share essentially fully mediates the effect

of gig work on the bargaining index. Column (3) adds the wife's log income to test the income-level channel. The coefficient on gig employment falls from 0.317 to 0.095, a reduction of 70%, and the Sobel Z is 8.67 ($p < 0.001$), implying a mediated share of 65.0%. Higher income thus explains part of the bargaining gain but does not drive the main effect to zero.

The contrast between columns (2) and (3) shows that both the structural independence of the income source and the level of income transmit the empowerment effect, but the former is economically more important. The 37.1-percentage-point gap between the two mediated shares (102.1% versus 65.0%) quantifies the contribution of where income comes from, over and above how much income there is.

This finding is consistent with the classic prediction of bargaining theory. In Chiappori's collective model, the Pareto weight adjusts in response to changes in distribution factors, not merely to an expansion of the budget constraint [10]. The decomposition provides causal evidence from the digital economy for this proposition: the payment structure—direct deposit into a personal account—is the dominant force behind the reorganization of intrahousehold power. The result also echoes Anderson and Eswaran's finding in rural Bangladesh that independent income from outside the husband's farm affects autonomy far more than income from within it [18]. This paper moves that insight from a categorical comparison to a continuous measure and provides quantitative evidence that income-source independence is a more fundamental driver of bargaining power than income level.

Table 7. Mediation Analysis

Variable	(1) Total effect	(2) Income-structure channel	(3) Income-level channel
Platform gig employment	0.317***	-0.00574	0.0954
	(3.17)	(-0.07)	(1.03)
Wife's income share		3.657***	
		(44.96)	
Wife's income (log)			0.198***
			(26.08)
Controls	Yes	Yes	Yes
Province + year FE	Yes	Yes	Yes
Observations	7,847	7,847	7,847
R^2	0.046	0.269	0.152
Indirect effect (a × b)		0.324	0.206
Sobel Z		7.91***	8.67***
Mediated share		102.1%	65.0%

Note: The dependent variable is the bargaining index. Column (1) reports the total effect; column (2) adds the wife's income share; column (3) adds ln(wife's annual income + 1). The indirect effect is the

product of the coefficient on PlatformGig in the mediator equation and the coefficient on the mediator in the outcome equation. The mediated share is the indirect effect divided by the total effect. *** p < 0.01, ** p < 0.05, * p < 0.1.

5.2 Heterogeneity Analysis

The baseline estimates establish average effects. The theoretical model predicts that these effects are not uniform: groups with lower initial bargaining positions and tighter institutional constraints should experience larger marginal gains. I examine heterogeneity along four dimensions: digital-economy development, the wife's education, region, and the wife's age. These dimensions also connect to broader evidence that empowerment effects depend on initial conditions and institutional context [60].

Digital-economy development

Table 8 splits the sample by provincial digital-economy development. In the high-digital-economy group, gig employment significantly raises the bargaining index by 0.313 standard deviations (t = 3.43), increases the husband's housework by 0.211 hours (t = 2.80), and reduces maternal coresidence by 0.863 months (t = -2.67), all at the 1% or 5% level. In the low-digital-economy group, none of the three coefficients is significant. The contrast indicates that the empowerment effect requires a minimum level of digital infrastructure: where platform penetration is low, the scarcity of gig opportunities itself constrains the realization of bargaining gains.

Table 8. Heterogeneity Analysis: Digital-economy Development

Variable	Bargaining index (high DE)	Housework time (high DE)	Coresidence (high DE)	Bargaining index (low DE)	Housework time (low DE)	Coresidence (low DE)
Platform gig employment	0.313***	0.211***	-0.863**	0.300	-0.116	0.122
	(3.43)	(2.80)	(-2.67)	(1.04)	(-0.50)	(0.24)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,931	11,044	7,250	2,916	7,018	4,948
R^2	0.040	0.218	0.610	0.066	0.157	0.663

Note: The sample is split at the median of provincial digital-economy development. DE = digital economy. All specifications include controls and province and year fixed effects; standard errors are clustered at the province level. *** p < 0.01, ** p < 0.05, * p < 0.1.

Wife's education

Table 9 splits the sample by the wife's education. The effect on the bargaining index is 0.361 (t = 2.45) in the low-education group, about twice the 0.189 (t = 1.81) in the high-education group, consistent with the nonlinear prediction of the model. The coresidence effect, however, runs in the opposite direction: it is -1.048 (t = -4.43) among highly educated women and insignificant (-0.456, t = -1.09) among less educated women. This divergence suggests two different transmission paths. Less educated women gain more bargaining power from gig work, whereas highly educated women's gig participation is more likely to crowd out mother-child time because their labor-supply elasticity is greater. The husband's housework effect is insignificant in both groups, confirming that housework is the weakest margin among the four outcomes.

Table 9. Heterogeneity Analysis: Wife's Education

Variable	Bargaining index (low education)	Housework time (low education)	Coresidence (low education)	Bargaining index (high education)	Housework time (high education)	Coresidence (high education)
Platform gig employment	0.361**	0.105	-0.456	0.189*	0.202	-1.048***
	(2.45)	(1.19)	(-1.09)	(1.81)	(1.63)	(-4.43)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,822	12,623	8,327	3,025	5,439	3,871
R^2	0.034	0.173	0.612	0.058	0.238	0.748

Note: Low education = junior high school or below; high education = senior high school or above. All specifications include controls and province and year fixed effects; standard errors are clustered at the province level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Region

Table 10 splits the sample into eastern and central-western provinces. The bargaining effects are similar (0.310, t = 1.87 in the east; 0.312, t = 2.37 in the center-west), but the behavioral effects diverge structurally. In the east, the husband's housework rises significantly (0.231, t = 2.07) and maternal coresidence does not change significantly (-0.142, t = -0.50). In the center-west, the husband's housework does not change (0.075, t = 1.11), but maternal coresidence falls sharply (-1.039, t = -3.87). The pattern matches regional differences in marketization and the availability of substitute care. In the east, a more developed service sector and childcare infrastructure allow the additional labor supply to be buffered by market-based housework outsourcing and substitute care, so the division of housework

can adjust without mother-child separation. In the center-west, the scarcity of substitute care makes gig participation inevitably costly in terms of maternal presence.

Table 10. Heterogeneity Analysis: Region

Variable	Bargaining index (East)	Housework time (East)	Coresidence (East)	Bargaining index (Central/West)	Housework time (Central/West)	Coresidence (Central/West)
Platform gig employment	0.310*	0.231*	-0.142	0.312**	0.0745	-1.039***
	(1.87)	(2.07)	(-0.50)	(2.37)	(1.11)	(-3.87)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,667	5,661	3,718	5,180	12,401	8,480
R^2	0.051	0.248	0.724	0.046	0.170	0.631

Note: East = eastern provinces; Central/West = central and western provinces. All specifications include controls and province and year fixed effects; standard errors are clustered at the province level. *** p < 0.01, ** p < 0.05, * p < 0.1.

Wife's age

Table 11 splits the sample at age 40. For younger women, the effects are concentrated in behavior: the husband's housework rises by 0.216 hours (t = 2.27) and maternal coresidence falls by 0.798 months (t = -3.45), while the bargaining index is insignificant. For older women, the effects are concentrated in income and power: the bargaining index rises by 0.435 standard deviations (t = 3.08), while neither behavioral outcome changes significantly. The life-cycle asymmetry has an intuitive interpretation. Younger women bear heavier childcare burdens, so the time-crowding effect of gig work is more salient; older women's children are more likely to be in school or grown, so gig income translates more purely into bargaining power without costing family care time.

Table 11. Heterogeneity Analysis: Wife's Age

Variable	Bargaining index (wife < 40)	Housework time (wife < 40)	Coresidence (wife < 40)	Bargaining index (wife ≥ 40)	Housework time (wife ≥ 40)	Coresidence (wife ≥ 40)
Platform gig employment	0.178	0.216**	-0.798***	0.435***	0.0765	-0.402
	(1.63)	(2.27)	(-3.45)	(3.08)	(0.80)	(-0.97)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,993	8,485	7,815	3,854	9,577	4,383
R^2	0.040	0.197	0.719	0.065	0.194	0.560

Note: The sample is split at the wife's age of 40. All specifications include controls and province and year fixed effects; standard errors are clustered at the province level. *** p < 0.01, ** p < 0.05, * p < 0.1.

Across the four dimensions, a consistent pattern emerges: the empowerment effect of gig work appears as different bundles of effects in different institutional and life-cycle settings. Where digital infrastructure is well developed, all three dimensions move together. Under other conditions, effects trade off between the income-power dimension and the behavior-time dimension: less educated and older women gain more bargaining power, while highly educated and younger women respond more strongly in behavior; the eastern effect leans toward housework, the central-western effect toward childcare. This structural differentiation, rather than uniform improvement on a single dimension, is the basic picture of how gig work empowers gender equality inside the household.

6. Conclusion and Policy Implications

This paper examines the effects of women's platform gig employment on intrahousehold bargaining power, the division of housework, and maternal coresidence. Using five waves of CFPS data from 2014 to 2022, I construct a composite bargaining index and a measure of months of maternal coresidence, and I use the interaction between 1984 post-office density and national digital-economy development as an instrument for county digital finance. The main conclusions are as follows.

First, gig participation significantly raises wives' intrahousehold bargaining power, and the effect is transmitted entirely through the wife's income share. The mediation decomposition further shows that the structural independence of the income source—the transfer of income control produced by direct platform payment—accounts for a 37-percentage-point difference in mediated shares beyond income level. This finding provides causal evidence from China's digital economy for Anderson and Eswaran's

proposition that where income comes from matters more than how much there is [18], and it adjudicates empirically between Becker's income-pooling hypothesis and Chiappori's collective model. Second, gig participation promotes a reallocation of housework, reflected in higher housework hours by husbands. The direction is opposite to the average effect of the digital economy reported by Zhang, Yang, and Tan [16], indicating that when women move from consumers to producers, the effect of digital technology on the gender division of labor may reverse. The result is consistent with Bertrand, Kamenica, and Pan's argument that gender-identity norms constrain behavioral adjustment [19]: change in the housework domain faces greater institutional friction than change in income and power.

Third, I treat the coresidence results with caution. The baseline OLS estimate is negative (-0.680), but the sign is not robust across IV (which turns positive), propensity-score matching (positive ATT), the Oster stability test ($|\delta^*| = 0.16$), and the Rosenbaum analysis ($\Gamma^* = 1.05$). The association is therefore easily explained by unobserved household selection. I do not treat "gig participation reduces maternal coresidence" as a robust causal conclusion; I retain it only as a descriptive association and note that its causal direction awaits a stronger identification strategy.

The conclusions have policy implications. Lowering institutional barriers to flexible female employment—platform labor-rights protection and portability of social insurance—would yield benefits beyond labor-market efficiency, potentially promoting gender equality through the intrahousehold bargaining channel. As for the effect of gig participation on maternal coresidence and childcare investment, the causal direction remains unresolved; policy should therefore be based on broadly relieving family care constraints rather than on a single causal claim.

This paper has several limitations. CFPS does not directly ask whether respondents perform digital gig work, so the measure is constructed from contract type and payment method. Months of maternal coresidence capture only the extensive margin of childcare investment, not the intensive margin. Placing both margins in a unified framework, and extending the analysis to other dimensions of household life, are important directions for future research.

Acknowledgments

The author thanks the China Family Panel Studies team at Peking University for making the data publicly available.

Funding

This research received no external funding.

References

[1] Greenwood J, Seshadri A, Yorukoglu M. Engines of liberation. Review of Economic Studies. 2005; 72(1):109-133.

[2] Goldin C, Katz LF. The power of the pill: Oral contraceptives and women's career and marriage decisions. Journal of Political Economy. 2002; 110(4):730-770.

[3] Wang J, Le Y, Zhang Y. Digital economy, household division of labor, and married women's labor participation. World Economic Papers. 2024; (4):25-45. (in Chinese)

[4] Yang J. Continuity and strategy: Gender differences in the division of housework in China, 1990-2010. Sociological Studies. 2014; (2):1-25. (in Chinese)

[5] Liu A, Luo C, Jiang F. The division of housework under the interaction of relative resources and gender-role attitudes. Journal of China Women's University. 2022; (2):5-16. (in Chinese)

[6] Becker GS. A Treatise on the Family. Cambridge, MA: Harvard University Press; 1981.

[7] Manser M, Brown M. Marriage and household decision-making: A bargaining analysis. International Economic Review. 1980; 21(1):31-44.

[8] McElroy MB, Horney MJ. Nash-bargained household decisions: Toward a generalization of the theory of demand. International Economic Review. 1981; 22(2):333-349.

[9] Chiappori PA. Rational household labor supply. Econometrica. 1988; 56(1):63-90.

[10] Chiappori PA. Collective labor supply and welfare. Journal of Political Economy. 1992; 100(3):437-467.

[11] Lundberg SJ, Pollak RA, Wales TJ. Do husbands and wives pool their resources? Evidence from the United Kingdom child benefit. Journal of Human Resources. 1997; 32(3):463-480.

[12] Lu Y, Zhang K, He F. Intrahousehold inequality, bargaining power, and married women's labor participation: A quasi-natural experiment based on the New Marriage Law. Studies in Labor Economics. 2020; 8(2):22-51. (in Chinese)

[13] Heath R, Tan X. Intrahousehold bargaining, female autonomy, and labor supply: Theory and evidence from India. Journal of the European Economic Association. 2020; 18(4):1928-1968.

[14] Duflo E. Grandmothers and granddaughters: Old-age pensions and intrahousehold allocation in South Africa. World Bank Economic Review. 2003; 17(1):1-25.

[15] Xie F, Jiang N, Kuang X. How does the gig economy change the gender wage gap? A dual perspective of family and market. Economic Theory and Business Management. 2022; (11):10-25. (in Chinese)

[16] Zhang X, Yang Z, Tan Y. Digital economy, household division of labor, and gender equality. China Economic Quarterly. 2023; 23(1):125-141. (in Chinese)

[17] Li J, Tian Y. The impact of the digital economy on married women's bargaining power. Northwest Population Journal. 2025; 46(1):57-71. (in Chinese)

[18] Anderson S, Eswaran M. What determines female autonomy? Evidence from Bangladesh. Journal of Development Economics. 2009; 90(2):179-191.

[19] Bertrand M, Kamenica E, Pan J. Gender identity and relative income within households. Quarterly Journal of Economics. 2015; 130(2):571-614.

[20] Oster E. Unobservable selection and coefficient stability: Theory and evidence. Journal of Business & Economic Statistics. 2019; 37(2):187-204.

[21] Rosenbaum PR. Observational Studies. 2nd ed. New York: Springer; 2002.

[22] Becker GS. A theory of the allocation of time. Economic Journal. 1965; 75(299):493-517.

[23] Gronau R. Leisure, home production, and work: The theory of the allocation of time revisited. Journal of Political Economy. 1977; 85(6):1099-1123.

[24] Coverman S. Explaining husbands' participation in domestic labor. Sociological Quarterly. 1985; 26(1):81-97.

[25] Shelton BA, John D. The division of household labor. Annual Review of Sociology. 1996; 22(1):299-322.

[26] Niu J. Patterns and evolution of the division of housework in contemporary China: A cultural diffusion perspective. Sociological Studies. 2023; (4):1-22. (in Chinese)

[27] Ding Y. Hidden inequality: How invisible housework and gender-egalitarian beliefs create perceptual gaps between spouses in urban middle-class families. Sociological Studies. 2023; (3):1-25. (in Chinese)

[28] Thomas D. Intra-household resource allocation: An inferential approach. Journal of Human Resources. 1990; 25(4):635-664.

[29] Zou W, Yin W. Women's bargaining power and household saving behavior: Evidence from the China Household Finance Survey. Studies in Labor Economics. 2024; 12(1):57-82. (in Chinese)

[30] Lundberg SJ, Pollak RA. Separate spheres bargaining and the marriage market. Journal of Political Economy. 1993; 101(6):988-1010.

[31] Blundell R, Chiappori PA, Meghir C. Collective labor supply with children. Journal of Political Economy. 2005; 113(6):1277-1306.

[32] Browning M, Chiappori PA, Weiss Y. Economics of the Family. Cambridge: Cambridge University Press; 2014.

[33] Chiappori PA, Fortin B, Lacroix G. Marriage market, divorce legislation, and household labor supply. Journal of Political Economy. 2002; 110(1):37-72.

[34] Wang S. Platform economy, female employment, and the gender income gap. Economic Perspectives. 2024; (2):112-128. (in Chinese)

[35] Chen H, Xie K. Digital economy and women's employment: A gender employment gap perspective. Studies in Labor Economics. 2023; 11(3):86-105. (in Chinese)

[36] Li L. The Impact of the Digital Economy on Employment from a Gender Perspective. Master's thesis. Nanjing: Nanjing University of Finance and Economics; 2024. (in Chinese)

[37] Zou Y, Chen Y, Song Y. Hometown digital economy development and labor return migration: An internet platform perspective. China Journal of Economics. 2023; 10(1):310-343. (in Chinese)

[38] Goldin C. A grand gender convergence: Its last chapter. American Economic Review. 2014; 104(4):1091-1119.

[39] Booth AL, van Ours JC. Job satisfaction and family happiness: The part-time work puzzle. Economic Journal. 2008; 118(526):F77-F99.

[40] Cogan JF. Fixed costs and labor supply. Econometrica. 1981; 49(4):945-963.

[41] Wu J. Gender division of labor and intergenerational support: How family relations shape new fatherhood practices. Journal of University of Science and Technology Beijing (Social Sciences Edition). 2025; 41(5):135-143. (in Chinese)

[42] Akerlof GA, Kranton RE. Economics and identity. Quarterly Journal of Economics. 2000; 115(3):715-753.

[43] Qing S. The effect of egalitarian housework division on women's fertility intentions. Sociological Studies. 2023; (1):1-24. (in Chinese)

[44] Wen X. Family mobilization: The familialization of digital labor and the reconstruction of the household division of labor - A digital ethnography of Douyin. Sociological Studies. 2023; (5):1-25. (in Chinese)

[45] Liu A. Precarious work, gender attitudes, and the division of housework: Evidence from matched couple data in CFPS 2020. Journal of Shandong University (Philosophy and Social Sciences). 2020; (6):1-15. (in Chinese)

[46] Xu Q. The effect of women's education on the division of childcare: Evidence from the Third Survey on the Status of Chinese Women. Collection of Women's Studies. 2021; (6):46-58. (in Chinese)

[47] Yuan X, Jin N. Mechanisms and effects of the division of housework on fertility behavior. Nankai Economic Studies. 2024; (3):80-98. (in Chinese)

[48] Zhang C. Is exclusive or cooperative parenting better? Parental division of childcare and child development in Chinese two-parent families. Society. 2024; (2):1-28. (in Chinese)

[49] Kabeer N. Resources, agency, achievements: Reflections on the measurement of women's empowerment. Development and Change. 1999; 30(3):435-464.

[50] Abraham KG, Haltiwanger JC, Sandusky K, et al. Measuring the gig economy: Current knowledge and open issues. In: Measuring and Accounting for Innovation in the Twenty-First Century. Chicago: University of Chicago Press; 2021. p. 257-298.

[51] Katz LF, Krueger AB. The rise and nature of alternative work arrangements in the United States, 1995-2015. ILR Review. 2019; 72(2):382-416.

[52] OECD, ILO, European Union. Handbook on Measuring Digital Platform Employment and Work. Paris: OECD Publishing; 2023.

[53] Chen MA. The future of work in the Global South: Rethinking the informal economy. Oxford Development Studies. 2020; 48(4):325-341.

[54] Han X, Wang X, He G. The impact of digital finance development on household welfare. China Economic Review. 2023; 78:101-118.

[55] Bartik TJ. Who Benefits from State and Local Economic Development Policies? Kalamazoo, MI: W.E. Upjohn Institute for Employment Research; 1991.

[56] Goldsmith-Pinkham P, Sorkin I, Swift H. Bartik instruments: What, when, why, and how. American Economic Review. 2020; 110(8):2586-2624.

[57] Nunn N, Qian N. US food aid and civil conflict. American Economic Review. 2014; 104(6):1630-1666.

[58] Stock JH, Yogo M. Testing for weak instruments in linear IV regression. In: Identification and Inference for Econometric Models. Cambridge: Cambridge University Press; 2005. p. 80-108.

[59] Lewbel A. Using heteroscedasticity to identify and estimate mismeasured and endogenous regressor models. Journal of Business & Economic Statistics. 2012; 30(1):67-80.

[60] Duflo E. Women empowerment and economic development. Journal of Economic Literature. 2012; 50(4):1051-1079.