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Financial Inclusion Practice and the Status of Rural Women in Family: Based on a Field Survey in Gansu China

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Abstract

This paper investigates the impact of financial inclusion on the status of rural women in their families in China. Financial inclusion raises hopes for decreasing poverty and improving gender equality. The former has been supported by many empirical studies, and the latter needs more validation. China attaches great importance to the role of financial inclusion in reducing poverty, but pays less attention to female financial inclusion, and scholars also ignore the relationship between financial inclusion and the status of women in family. This study aims to fill this gap. We propose five research hypotheses that articulate how financial inclusion promotes or improves the status of women in family, and use a field survey in Gansu Province in western China for empirical testing. We find that financial inclusion in China promotes rural women's development and improves their status in the family, but this is not obvious overall. Specifically, digital payment, financial literacy education and financial management based on fintech partially contribute to women's family status, while the effect of formal individual savings accounts depends on how women use them. We further find indication that lowering the threshold for loans is not associated with the status of rural women in family, and the household-based microcredit model may hide or even exacerbate gender inequality in families.

Keywords

Financial Inclusion, Gender Equality, The Status of Rural Women in Family, Women Empowerment

1. Introduction

This study focuses on whether the practice of inclusive finance in western China has promoted or improved the status of rural women in family in China. The status of women in family mainly refers to the rights and abilities to obtain and control household resources. Inclusive finance has been widely understood as the access to financial services and products for vulnerable groups such as the poor and the women, and raised hopes for decreasing poverty and improving gender equality. In essence, the issue of women's family status is an extension of gender inequality at the microscale, and is often entangled with those issues such as female exclusion, discrimination or inequality in the fields of employment, education, health care culture and finance, presenting complicated causal relationships.

Since Mohammad Yunus pioneered the modern microfinance model in the 1970s, the access to basic financial services has been linked to issues such as gender equality and development opportunities, providing a financial channel for improving the status of women in family. Within traditional families, men and women differ significantly in access to and use of credit, with women having less financial inclusion (Ghosh & Vinod, 2017). The various types of job market discrimination on the path to women's economic independence have forced many women to become self-employed, and the effective use of microcredit opportunities has become a rational choice. In this context, financial inclusion with an emphasis on equal opportunity was identified at the beginning of the 21st century as a key policy tool to eliminate gender discrimination, promote social inclusion, reduce poverty and advance sustainable development.

Gradually, research on the correlation between financial inclusion and gender equality or social equality has been broadening and deepening, from financial availability to financial services usage, from bank accounts to microloans, and thence to financial literacy, empowerment and digital credit (Constantin & Oliver, 2023; Goyal & Kumar, 2021; Subrahmanyam & Santosh, 2019; Hasan et al., 2020; Kim et al., 2018). The researchers not only focus on the social impact of inclusive finance in eliminating gender discrimination and empowering women, but also further refine a new area called women's financial inclusion, which aims to address the gender gap in financial inclusion. China's achievements in the development of inclusive finance focus on narrowing the urban-rural financial services gap, improving rural financial accessibility and reducing poverty (Chen & Yuan, 2021). However, local scholars have rarely paid attention to the impact of inclusive finance on gender equality and women's social status or family status.

Therefore, this study focuses on the question of whether financial inclusion improves or enhances the status of women in the family in less developed regions, and explores the correlation between the specific practice of inclusive finance and the improvement of women's status in the family based on a field survey data in Gansu province. The objective of this study is to provide a more refined explanation feedback mechanism of inclusive financial actions under specific national and regional conditions. It is of great value to discuss this topic in the context of China, especially the underdeveloped provinces in the western region, which is conductive to understanding the mechanisms at the microscale for inclusive finance in promoting gender equality under different national conditions.

2. Literature Review and Research Hypotheses

Studies on inclusive finance to promote gender equality can be summarized into basically three categories: overall evaluation, mechanism analysis and influencing factor analysis. Based on the literature, this study proposes five research hypotheses that financial inclusion promotes or improves the status of women in family.

2.1. Inclusive Finance and Gender Disparity

Researchers generally believe that financial inclusion builds a link between financial institutions and vulnerable groups such as women, and empowers the latter to pay for durable consumer goods, education and training, to improve housing and health conditions, and to mitigate financial risks through access to savings, loans and insurance. From Sub-Saharan Africa to South Asia, Nigeria, Namibia, Tanzania, Zimbabwe, India, Indonesia, Bangladesh and other countries provide much positive evidence of the effects of financial inclusion on economic growth and greater gender equality (Yeyouomo et al., 2023; Goksu, 2022; Sunday et al., 2022). The same is true when "*remittance*" is considered as a fundamental financial instrument for reducing gender disparities in economic outcomes (Eric, 2023). In addition, Mohamed & Mohammed (2023) demonstrated that the financial inclusion of Islamic MFIs for female farmers can decrease loan credit risk. And Chaudhuri et al. (2020) showed that low levels of female financial inclusion are detrimental to women's employment and education, as well as the ability of women to run their own businesses. ***Thus, the first hypothesis of this study is that financial inclusion can promote the development of rural women and improve their status in the family.***

2.2. Financial Availability and Women's Social Status or Family Status

Financial availability, such as personal formal accounts, microcredit and microinsurance is widely emphasized as a key mechanism for inclusive finance to narrow the gender gap and eliminate discrimination against women. Since women have a unique preference for savings due to the characteristics of risk aversion, the availability of free savings accounts for them is a prerequisite for increasing their family decision-making power. Some developing countries such as Nigeria, India, Zambia and the Philippines have provided credible conclusions (Ananwude et al., 2018; Terrence et al., 2017). A formal saving account in a bank is the first step to financial empowerment and can effectively stimulate positive financial behaviors such as savings and managing risks. Croson & Gneezy (2009) confirmed that the opening of women's personal accounts led to significant increases in account saving rates, business investments and income opportunities. Ten years later, a correlation study by Ananwude et al. (2018) further verified that subdivided accounts including daily savings accounts, rental savings accounts, newborn accounts and children's education accounts markedly improved women's control over their lives. ***Thus, the second hypothesis is that the formal banking accounts facilitate rural women's decision-making power in the family.***

In addition to increasing savings to cope with daily expenses and risks, formal bank accounts are also conducive to accumulating personal credit and lowering credit thresholds. Mndolwa & Alhassan (2020) found in Tanzania that women with formal savings accounts were 2% more likely to access formal credit. Bangladesh, India, and the Philippines have previously provided hard evidence that microcredit can boost employment rates, income levels, family status, and social empowerment for poor women (Yaumidin et al., 2017). Another empirical study involving 91 developed and emerging market countries also shows that women's bank accounts, credit cards, loans and payment methods contribute to women's financial situation and greater gender equality (Cabeza-Garcíaa et al., 2019). Recent studies have further shown that women's risk-averse nature can effectively reduce the risk of loan default, which in turn increases the motivation of financial institutions to serve women (Mohamed & Mohammed, 2023; López-Sánchez et al., 2022). ***Therefore, the third hypothesis of this study is proposed, that is, lowering the microcredit threshold is conducive to improving the status of rural women in family.***

2.3. Fintech Application and Female Financial Inclusion

With the development of fintech, new technologies, including telephone banking, online banking, mobile banking, mobile payments, face-authorized payments, digital wallets and others have emerged one after another, and finance has become increasingly open and inclusive. There is more optimistic support for the argument that digital inclusive finance is narrowing the gender gap (Bongomin et al., 2018). Rural and poor women have more access to personal accounts to accumulate savings, learn financial literacy, or manage household finances (Ouma, Teresa, & Were, 2017), as well as increase credit availability based on social networks constructed through social media and personal credit (Oskarsdttir et al., 2019).

Sub-Saharan Africa provides strong evidence that fintech companies can significantly close the gender gap in access to and use of financial services (Yeyouomo et al., 2023). Data on pastoralist household food consumption in southern Ethiopia show that index insurance can provide financial inclusion and resilience against climate change for poor female farmers in developing countries (Timu et al., 2023). The significant increase in women's acceptance of digital finance in Indonesia during the COVID-19 pandemic (Budi et al., 2023) proves that fintech not only improves financial inclusion for women, but also improves women's voice in family decision-making. ***Thus, the fourth hypothesis is proposed, that is, fintech application and the diversification of payment me-***

thods can enhance the status of rural women in family.

2.4. Financial Literacy and Female Financial Inclusion

Against the background of the popularization of bank accounts and the widespread application of digital finance, the importance of gender, employment, income, assets, financial literacy, education, culture, society and other factors to inclusive finance has gradually become prominent (Thyge, 2022; Pearson et al., 2017). The lack of financial literacy in financial concepts, awareness and risk-return perception is recognized as a key factor in constraining women's access to financial services. Early research revealed that financial literacy determines women's awareness of financial services usage and financial management behaviors, and financial literacy is positively correlated with financial inclusion (Dupas & Robinson, 2013). The contribution of financial literacy to the advancement of women in finance is gradually being recognized (Mukong et al., 2020). The latest evidence on women's use of digital financial services during COVID-19 suggests that low financial literacy inhibits women's willingness to use digital financial technologies or mobile payments (Budi et al., 2023), thereby reducing their economic participation and voice within the family. ***Thus, the fifth hypothesis of this study is that financial literacy and financial management behavior affect women's household decision-making power, and that education, employment and income have a moderating effect.***

3. Study Design

3.1. Variable Selection and Modelling

Independent Variables

Inspired by Pitt et al. (2006), Beck et al. (2007), Saroj & Singh (2015), Ananwude et al. (2018) and Ibtasam et al. (2018) on financial inclusion measurement indicators assessing how financial inclusion empowers women's potential, this paper uses indicators such as personal bank accounts, microloans/microcredits, diversified payments, financial management behavior, and financial literacy as independent variables to measure the development of financial inclusion (see **Table 1**). Among them, financial literacy is a continuous variable that can be measured from three aspects: degree of understanding, frequency of contact and importance. Its Cronbach's alpha index is 0.718 > 0.7, which means good reliability.

Dependent Variables

In this study, the status of rural women in family is designated as the dependent variable in the manner of the rural women's microcredit empowerment evaluation index of Li et al. (2011) and the survey of women's empowerment in agriculture (Alkire et al., 2013). Specifically, this study examines the women's status in their families revealed by field surveys in Gansu Province, China, and extracts 17 items related to inclusive finance that can measure the status of women in family, including "control over personal income and other property", "free socialization, shopping, and entertainment", "decision-making power on

Table 1. Variables of financial inclusion improving women's status in family.

Type of variables	Variables	Description of variables
Independent variables	Personal bank accounts	0 = no, 1 = yes
	Microloans/microcredits	0 = no, 1 = yes
	Diversified payments	0 = cash, 1 = digital
	Financial management behavior	0 = no, 1 = yes
	Financial literacy	1 = no, 2 = a little bit, 3 = moderate, 4 = familiar, 5 = skilled
Dependent variables	Consumption autonomy	0 = no, 1 = yes
	Participation in major family decisions	0 = no, 1 = yes
	Independent judge on marriage and family	0 = no, 1 = yes
	Family financial resource control	0 = no, 1 = yes
	Traveling freely	0 = no, 1 = yes
Other variables	Age	1 = <20 years old, 2 = 20 - 30 years old, 3 = 31 - 40 years old, 4 = 41 - 50 years old, 5 = >50 years old
	Marriage	1 = unmarried, 2 = married, 3 = divorced, 4 = widowed
	Family size	number of family members
	Registered residence	0 = rural, 1 = urban
	Religious beliefs	0 = no,1 = yes
	Education	1 = none, 2 = elementary, 3 = junior high school, 4 = high school/vocational high school, 5 = college, 6 = bachelor's degree, 7 = master's degree and above
	Average income per month*	1 = none; 2 = CNY 1570.00 - 2570.00; 3 = CNY 2570.00 - 3570.00; 4 = CNY 3570.00 - 4570.00; 5 = CNY 4570.00 - 5570.00; 6 = CNY 5570.00 or more

Notes: *According to the Interim Regulations on Minimum Wage Standards in Gansu Province, the area is a second-class area, with a minimum wage of CNY 1570.00 per month, which equals approximately USD 197.00 (minimum wage is CNY 16.50 per hour, which equals approximately 2 USD).

household expenditure", "participation in fertility decisions around childbirth and children's education", and "marital relationship and domestic violence awareness", and so on. The KMO value of the 17 items was 0.818 > 0.7, and after the principal component analysis was conducted, the 17 items were clustered into 5 principal components, including: financial autonomy, social communication rights (traveling freely), voice on family income and expenditures, family affairs and decision-making rights, and the independent awareness of safeguarding the legitimate rights and interests of marriage. The accumulation of the square of the rotational load of the five principal components was 66.868%, and the components matrix was sorted into independent awareness of safeguarding the legitimate rights and interests of marriage, family affairs decision-making rights, financial autonomy, voice on family income and expenditure, and social communication right. The Cronbach's alpha values was 0.710, 0.748, 0.781, 0.670 and 0.862, respectively, which indicate what categories could better measure the average family status of rural women.

Other Variables

Previous research has found that employment, income, and education are important drivers of female financial inclusion and gender equality (Goksu, 2022). In countries or regions with wide disparities in education between men and women, it is more difficult for women to access financing support (Morsy, 2020). To better predict whether the development of financial inclusion will help improve the status of rural women in family, this study excludes the influence of demographic variables such as age, marital status, family size, urban and rural areas, and religious beliefs, but takes into account factors such as education, employment, and income. In addition, marital status is a disordered multicategory variable, which is converted to dummy variables when constructing the model. With unmarried status as the baseline group, married, divorced and widowed are built into the model as three dummy variables.

The Model

In this paper, a multiple linear regression model (Weber & Ahmad, 2014; Sekaran, 2003) is adopted to explore the impact of financial inclusion on the status of rural women in family because of two factors: one is that the independent variable is composed of categorical variables and numerical variables, while the dependent variable is a numerical variable, and the other is that the linear regression model is widely used in previous research to study the impact of microfinance on women's empowerment. The multiple linear regression model of the impact of financial inclusion on the status of rural women in the family is expressed as follows:

$$\begin{aligned}\mathrm{ASF} = {} & \varepsilon + \beta_0 + \beta_1\mathrm{PBC} + \beta_2\mathrm{SL} + \beta_3\mathrm{PAY} + \beta_4\mathrm{FMB} + \beta_5\mathrm{FL} \\ & + \beta_6\mathrm{AGE} + \beta_7\mathrm{EDU} + \beta_8\mathrm{married} + \beta_9\mathrm{divorced} + \beta_{10}\mathrm{widow} \\ & + \beta_{11}\mathrm{FSIZE} + \beta_{12}RR + \beta_{13}\mathrm{RELIGION} + \beta_{14}\mathrm{INCOME}\end{aligned}$$

where ASF is the average status of rural women in the family, β is the estimation parameter, PBC is a personal bank account, SL is a small loan (including microcredit), Pay is the presence of diversified payments, FMB is financial management behavior, FL stands for financial literacy, AGE is age, EDU indicates education level, and married, divorced and widowed are three dummy variables for marital status, FSIZE represents family size, RR is registered residence, INCOME is average monthly income, and ε is the random error term.

3.2. Filed Survey Data Acquisition

Sample Selection

The Chinese government has vigorously promoted financial inclusion since 2006, and made remarkable achievements in financial accessibility, which has led to discussions on the relationship between financial opportunity and gender equality. As a mirror of the greater situation in China, Gansu Province is a key province in the implementation of inclusive financial policies in China due to its uneven regional development, the obvious dual urban-rural structure and the weak rural financial foundation. The province is multiethnic, with a mix of cultures, customs and religious beliefs, and despite the emphasis on gender equality in the law, the traditional model for the status of women in family places them in an inferior position. With the advancement of inclusive financial policies, the traditional social acquaintances, modern social credit contracts and digital technology credit have gone hand in hand in the field of financial practice in Gansu Province, and the female-inclusive finance has had prominent momentum. Therefore, Gansu Province is a good observation case to examine whether the development of inclusive finance has improved the status of rural women in family.

Field Survey Process

This study uses a questionnaire survey to obtain data, which is composed of demographic information, questions about financial inclusion development and questions about the status of rural women in family. The survey is not set to a standardized scale but designed as a semi-structured questionnaire to reflect the real situation of the respondents to the greatest extent. According to the population distribution of Gansu Province, as well as topography, transportation and other factors, we carried out a random household survey in villages under the jurisdiction of six medium-sized cities, including Lanzhou, Baiyin, Tianshui, Zhangye, Pingliang and Qingyang, which ranked high in population density. However, when we arrived at the sample villages, we found that most of the people in the abovementioned villages had left to earn money elsewhere and would only return on weekends or during the busy agricultural season and the Spring Festival; the majority of those left behind are elderly. Due to the language barriers, it was difficult for us to conduct the investigation effectively, and we made several ineffective roundtrips. Eventually, with the help of several local social workers, we finished 326 completed questionnaires from 52 villages over four months. After excluding 21 invalid questionnaires, there were 305 valid questionnaires, accounting for 76.25% of the total. Supplemented by one-on-one interviews, we uncovered some valuable clues about the relationship between financial inclusion and the status of rural women in family.

3.3. Statistical Results

The descriptive statistics for the main variables of the questionnaire are shown in Table 2.

As shown in Table 2, the demographic variables of the 305 samples in Gansu Province basically conform to a normal distribution, except for the two variables of marital status and religion. The average monthly income for most of them is

Table 2. Summary of statistics for the main variables (n = 305).

Variables	Mean	Min	Max	Std. dev.
Age	3.2459	1	5	1.2959
Marriage	1.86	1	4	0.674
Family size	3.37	1	7	1.053
Education level	4.60	1	7	1.368
Registered residence	0.6393	0	1	0.481
Religion	0.14	0	1	0.345
Average income per month	2.54	1	6	1.282
Personal bank account	0.98	0	1	0.127
Small loan	0.27	0	1	0.442
Financial management behavior	0.48	0	1	0.500
Diversified payments	0.38	0	1	0.486
Financial literacy	3.4295	1.33	5.00	0.7926
Independent judge on marriage and family (0 = no, 1 = yes)	0.8959	0.00	1.00	0.2357
Participation in major family decisions (0 = no, 1 = yes)	0.7820	0.00	1.00	0.3048
Family financial resource control (0 = no, 1 = yes)	0.9230	0.00	1.00	0.1940
Consumption autonomy (0 = no, 1 = yes)	0.9410	0.00	1.00	0.1800
Traveling freely (0 = no, 1 = yes)	0.9098	0.00	1.00	0.2747
Average status of rural women in family (0 = no, 1 = yes)	0.8851	0.12	1.00	0.1709

approximately CNY 1570.00, which is a relatively low. Nearly 100% have access to basic financial services, but the usage frequency of small loans is less. Nearly 50% engage in financial management practices, and are more inclined to save and buy insurance products. Their recognition of digital financial services is not as high as expected and they are not yet very accustomed to digital payments. On the whole, their basic financial literacy is at a medium level and they have significant risk aversion characteristics.

The mean status of rural women in their families in the 305 observations is 0.8851, but the performance in all dimensions is uneven. In these categories, 13.5% have to endure marital misfortune or even domestic violence, 19.2% cannot participate in family planning, 17.3% have no right to decide on the family purchase of durable consumer goods, 11.5% cannot independently make decisions about consuming personal items of higher value, 13.5% cannot make decisions about their own or children's education affairs, 11.9% cannot make decisions about their own daily expenses, 8.3% cannot control their personal income, and 4.2% cannot control their personal savings. Approximately 9.9% are restricted from traveling freely.

Due to the small sample size, the S-W test is used and the significance p = 0.000 < 0.05, indicating that the mean status of rural women in the family does not meet the normal distribution. Then, the nonparametric test is used to verify whether the development of inclusive finance improves the status of rural women in family. According to the Mann-Whitney U Test, there are significant differences in the mean status of rural women in the family in terms of whether they have personal bank accounts ($p = 0.035$), engage in financial management practices ($p = 0.002$) and use digital payments ($p = 0.004$), however there is no significant difference in the mean status of rural women in the family with or without microcredit ($p = 0.819$) (see Table 3). In particular, the analysis using the Pearson correlation test finds that financial literacy is positively correlated with the mean status of rural women in the family ($r = 0.282$, $p = 0.000 < 0.01$), indicating that rural women with better financial literacy have greater choices in economic activities and daily life (see Table 4).

The results of multiple linear regression analysis (MLRA) show that financial literacy ($\beta = 0.232$, $p < 0.001$) and digital payments ($\beta = 0.148$, $p < 0.05$) significantly predict the improvement of the status of rural women in family by 10.6%, while personal bank accounts ($\beta = 0.091$, $p = 0.098$), small loans/microcredits ($\beta = 0.042$, $p = 0.442$) and financial management behavior ($\beta = 0.096$, $p = 0.096$) have no such effect. There is no multicollinearity between variables (VIF < 5) (see Table 5).

Further, after controlling for the demographic variables of rural women in the sample, MLRA reveals that personal bank accounts, microloans, diversified payments, financial management behavior and financial literacy cannot significantly positively predict the improvement of the mean status of rural women in their families, while education level ($\beta = 0.150$, $p < 0.05$), income level ($\beta = 0.215$, $p < 0.001$) and urban registered residence ($\beta = 0.189$, $p < 0.0$) are obviously positively correlated. There is no multicollinearity between variables (VIF < 5) (see Table 6).

Table 3. Results of a nonparametric test of the mean family status of rural women.

	Personal bank account	Small loan/ microcredit	Financial management behavior	Diversified payment
Mann-Whitney U	358.000	8924.500	8763.000	9503.500
Wilcoxon Signed-Rank Test	373.000	34124.500	26718.000	22383.500
Z	−2.113	−0.0229	−3.100	−2.873
Asymptotic double-tailed	0.035	0.819	0.002	0.004

Table 4. Pearson correlation between financial literacy and the mean family status of rural women.

		The mean status of rural women in the family	Financial literacy
The mean status of rural women in the family	Pearson correlation coefficient	1	0.282**
	Sig. double-tailed	-	0.000
Financial literacy	Pearson correlation coefficient	0.282**	1
	Sig. double-tailed	0.000	-

**The correlation is significant at level 0.01 double-tailed.

Table 5. Results of the multiple linear regression analysis[a] (n = 305).

	Model	B	Beta	t	p	VIF	F	R	R^2	Adjusted R^2
1	(constant)	0.566	-	7.183	0.000***[b]	-	8.237	0.348[b]	0.121	0.106
	Personal bank account	0.050	0.232	4.020	0.000**	1.566				
	Small loan	0.034	0.096	1.672	0.096	1.291				
	Financial management behavior	0.051	0.148	2.710	0.007*	1.154				
	Diversified payment	0.016	0.042	0.769	0.442	1.107				
	Financial literacy	0.123	0.091	1.662	0.098	1.125				

a. Dependent variable: mean family status of rural women. b. Predictors: (constant), personal bank account, small loan, diversified payment, financial management behaviour, financial literacy. *$p < 0.05$, **$p < 0.001$.

Table 6. Results of the MLRA[a]-after controlling for the demographic variables of rural women (n = 305).

	Model	B	Beta	t	p	VIF	F	R	R^2	Adjusted R^2
1	(constant)	0.434	-	4.545	0.000 [b]		6.542	0.490	0.240	0.203
	Family size	0.016	0.096	1.598	0.111	1.370				
	Education	0.019	0.150	2.022	0.044*	2.101				
	Religion	−0.044	−0.089	−1.630	0.104	1.131				
	Income per month	0.029	0.215	3.688	0.000**	1.299				
	Age	0.015	0.112	1.315	0.189	2.769				
	Registered residence	0.068	0.189	3.071	0.002*	1.447				
	Married	0.004	0.012	0.133	0.894	3.042				
	Divorced	0.088	0.153	1.875	0.062	2.545				
	Widow	0.070	0.061	0.981	0.327	1.485				
	Personal bank account	0.054	0.040	0.736	0.462	1.125				
	Small loan	0.019	0.048	0.890	0.374	1.107				
	Diversified payment	0.030	0.086	1.571	0.117	1.154				
	Financial management behavior	0.015	0.041	0.708	0.479	1.291				
	Financial literacy	0.020	0.091	1.421	0.156	1.566				

a. Dependent variable: mean family status of rural women. b. Predictors: (constant), financial literacy, small loans, personal bank account, diversified payment, financial management behavior, religion, income per month, registered residence, education, family size, age, married, divorced, widowed. *$p < 0.05$, **$p < 0.001$.

Simply summary, the regression analysis based on small-scale field survey in Gansu Province shows that the development of inclusive finance is indeed conducive to the improvement of the status of rural women in family; however, the effect is not very obvious. And the effect is even more minimal after controlling for the demographic variables of rural women.

4. Findings and Discussion

Based on the MLRA results of 305 observations of rural women in Gansu Province in western China, the study verified Hypothesis 1, 2, and 4, with Hypotheses

3 not validated, and Hypothesis 5 only partially validated. In other words, in the context China's policy attaching great importance to financial inclusion, the practices of inclusive finance have indeed enhanced the status of women in family, though the effect is not obvious. This result may have something to do with its mechanism of action. It confirms the empowerment effect of digital payments, as well as Deka (2015) positive argument of the effect of financial literacy on women's empowerment, but fails to demonstrate that personal bank accounts, microloans and financial management behaviors have similar effects.

4.1. The Role of Personal Bank Accounts Depends on Usage

Access to financial services runs through the development of inclusive finance in Gansu Province, and is characterized by the popularity of personal bank accounts. Personal bank accounts are similar to an access ticket for economic entities to participate in financial and economic activities; rural women with personal bank accounts mean that they have the chance to be seen, which is a necessary prerequisite for discussing the advancement of the status of rural women in their families. The account coverage in Gansu is close to 100%, and mobile banking apps are increasingly popular. Further discussion reveals that whether the financial availability can enhance the improvement of the status of rural women in the family depends on the usage of their individual bank accounts. The financial service application scenarios provided by digital payments can help rural women improve their financial literacy and gradually enhance their ability to make independent consumption choices ability and have financial management skills, which will help improve the status of rural women in the family in the long run. In other words, a personal formal bank account by itself does not strengthen women's decision-making power in family affairs, and is meaningless unless it is linked to other economic activities and social participation. In fact, most of rural women in the sample consider themselves as having a higher status in their families, not due to their personal bank accounts but due to their stable salaries and government subsidies for medical care and pensions.

4.2. Microloans Do Not Help to Improve the Status of Rural Women in the Family

Unexpectedly, microloans (including digital credit) have no significant positive impact on improving the status of rural women in family, whether married or religious, a result that seems to be less in line with the prevailing view that has dominated the development of modern microcredit models. Jiang, Paudel & Zou (2020) extended *the credit household mechanism* to *the credit village mechanism* and found that microcredit could alleviate the credit constraints of poor rural households to a certain extent, but had no substantial impact on women's rights and status. If microloans do not translate into effective investment or employability, it is meaningless for improving women's financial situation and may even worsen their debt pressure. This argument further confirmed the point presented by Cabeza-Garcíaa et al. (2019) and Constantin & Oliver (2023).

Therefore, microcredit does not necessarily improve the status of rural women in family. Why is that? Combined with the practice of inclusive finance in Gansu Province, the answer may be as follows.

Under the framework of China's Poverty Alleviation Strategy, the focus of the microloans in Gansu Province is to help poor households lift themselves out of poverty. The main force of inclusive finance in Gansu Province is composed of state-owned commercial banks such as Rural Credit Cooperatives, Bank of China, and the Industrial and Commercial Bank of China. Guided by the local regulations such as *Opinions on Further Strengthening the Work of Women's Guaranteed Loans*, with the support of approximately CNY 35 million in central-local fiscal discounts and CNY 39 million in guaranteed funds for rural women's microloans, inclusive financial institutions in Gansu Province have provided a total of CNY 420 million in guaranteed loans (including microcredits) to rural women.[1] However, these loans, which target at rural women, are actually operated by *households*. The CNY 420-million-yuan loan was distributed to 7945 poor households rather than individual rural women. While these loans support poor households in developing farming, retailing, clothing, restaurants and farmhouses, and help poor households increase their incomes, rural women's disadvantaged position in the allocation of financial resources and financial service opportunities has also been hidden, and women's individual financial needs have been replaced or obscured by household financial needs. The face-to-face communication in the loan disbursement process shows that the design of microloan products in Gansu Province continues to emphasize traditional masculine tendencies. Although financial institutions comply with the inclusive financial policies and regulations to provide loans to rural women, in practice, they always use the husbands of rural women as the basis of credit reporting to evaluate loans before issuance. Rural women, therefore, lack actual control over the loan usage. This factor also explains the fact that up to 67.66% of rural women use microloans for consumption in areas such as housing construction or vehicles rather than starting a business.

4.3. Payment Diversification Based on Fintech Is Conducive to Improving the Status of Rural Women in Family

This study finds that diversified payments can significantly predict the improvement of the status of rural women in the family by 10.6% without considering other factors. With the promotion of bank apps, as well as internet financial platforms such as WeChat and Alipay, digital bank accounts and mobile payments are becoming increasingly popular in rural areas. The expansion of payment types from cash to mobile payments or digital payments is conducive to promoting the ability of rural women to make independent consumption choices, subtly affecting their financial concepts and ideas on wealth. Further-

[1] *Source*: Gansu Province Government Network. Su Ju, president of Gansu Provincial Women's Federation, came to the district to investigate the work of women's guaranteed microloans. http://www.baiyinqu.gov.cn/cms/view/542.html, 2016-05-06/2021-02-01.

more, mobile payments have created a series of vivid education scenarios for developing financial literacy, which is beneficial to enhancing the sense of financial self-realization among rural women and enabling them to make more reasonable arrangements about family resource allocation, education and training, pensions and other affairs. While mobile banking and digital payments can help rural women control their lives, weak awareness of financial risks, consumption traps and inappropriate bills online may lead to the opposite result, undermining the decision-making power of the rural women in their families. As a rural mother said in an interview, "Because several times I bought something bad on Taobao, my husband no longer lets me manage family finances, and my parents-in-law no longer trust me." A similar phenomenon exists in Ghana. Empirical research based on data on tomato sales channels in eastern Ghana shows that the poverty reduction and other welfare effects of inclusive finance due to mobile technology are not obvious in female-headed households (Abor et al., 2018).

4.4. Financial Management Behavior Is Not Directly Related to the Status of Rural Women in Family

In the theoretical framework of inclusive finance, financial management behavior is an effective way for low-income groups to accumulate assets, increase property income, and improve risk response capabilities. As an expansive hypothesis, if women can increase their household income through financial management, they can increase their voice over education and training, child nutrition, medical care and insurance, pensions, independent consumption and other matters. However, this hypothesis was also not tested in the samples of rural women and may be surmised from the risk-averse nature of rural women. A total of 63.24% of the rural women in the sample engaged in financial management but preferred timed deposits and savings insurance products, and the cycle was generally between 5 - 20 years. The income it generated did not have any impact on the status of rural women in family. In addition, due to the COVID-19 pandemic, rural women's income from migrant employment in urban areas has dropped significantly, and they tend to save rather than consume or start a business. This is a family-based anti-risk behavior and is not related to the status of rural women in family.

Generally, there is no doubt that financial inclusion has a positive impact on women's development, but if the economic exclusion of women from economic, social and cultural factors is not radically eliminated (Roy & Patro, 2022), financial inclusion is ultimately unsustainable, even if these practices are known to reduce the gender gap (Sholevar & Laurence, 2020; Chowdhury, 2019), as is the status of rural women in family. It is not so much that the development of inclusive finance improves the status of rural women in family, but that the equal rights of education, employability and stable income determine the status of rural women in family. This finding has also been validated in Indonesia, South

Asia and Tanzania on women's financial gender parity (Budi et al., 2023; Goksu, 2022; Mndolwa & Alhassan, 2020).

5. Conclusion

The evidence from a sample of 305 surveys in Gansu Province suggests that it is difficult for the development of inclusive finance as a whole to directly improve the status of rural women in family in China, while education, employment and a stable income are the strong guarantees of a women's voice in the family. Specifically, whether formal individual savings accounts increase the decision-making power of women in the family depends on how women use them; Microcredit does not necessarily improve the status of women in their families, and the use of *household* in its operation model may hide the reality of inequality between men and women. Fintech and the diversification of payment methods and financial literacy education it brings do contribute to women's family status.

To some extent, this study supplies necessary information on the Chinese sector in research into inclusive finance and gender equality. In the context of China's policies of high emphasis on equal rights for men and women, nine-year compulsory education, and the mandatory implementation of inclusive finance, the impact of inclusive finance itself on the status of rural women in family is far less than that of education and employment. These other two elements directly enhance women's employability and generate a stable source of income. However, this study still shows that some economic, social and cultural economic exclusions of women can restrict women's access to financial services.

The policy implications and theoretical value of this study lie in observing the social effects of inclusive finance practices from the perspective of the change in the status of rural women in the family. This study also provides a more refined explanation of the feedback mechanism of inclusive financial actions. As a poverty reduction policy tool, inclusive finance creates equal development opportunities for women from the aspects of financial availability; however, there is no direct causal relationship between inclusive finance and the improvement of women's status family in the family. Therefore, the significance of financial inclusion on reducing the gender gap or raising the status of women should not be exaggerated when the constraints caused by social exclusion and cultural exclusion are not considered.

The shortcomings of this study are that the survey sample size is limited by the difficult research conditions, and the method of measuring the level of financial inclusion development across the five independent variables is too simple. Although the regression results are not very significant, this study is still particularly valuable. It reminds developing countries that inclusive finance is not a panacea for gender inequality or the disempowerment of rural women. The effectiveness of financial inclusion in improving the status of rural women is inseparable from macroscale policies and investments in women's education, employment and social security.

Conflicts of Interest

There are no conflicts of interest associated with this research.

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