Does Credit Expansion Promote Common Prosperity? Evidence from County-Level Urban–Rural Income Disparities

Ziyun Wang[1], Zhe Li[2*], Di Hu[2], Wushen Huang[2], Wenze Xiong[3]

[1] Hainan Vocational University of Science and Technology, Haikou, Hainan 571126, China
Ziyun Wang and Zhe Li contributed equally to this work and should be considered co-first authors
[2] City University of Macau, Macau, 999078, China
[3] School of Business, University of Auckland, 12 Grafton Road, Auckland, New Zealand

*Corresponding author: Zhe Li, F25092100152@cityu.edu.mo

Abstract. The focus of common prosperity is to narrow the income gap between urban and rural residents. However, whether the credit expansion really benefits the rural and low-income groups, the existing research still lacks more detailed evidence. This study uses county panel data to compare the different effects of per capita loan expansion on the incomes of urban residents and rural residents. In this paper, the two-way fixed effect model is used to control the county fixed effect and the year fixed effect. At the same time, this paper uses a stacked uniform framework to put urban and rural samples in the same regression, and directly compares the elastic differences between urban and rural income and credit. The results show that the marginal effect of credit expansion on rural income is obviously weaker than that on urban income. Robustness test generally supports the conclusion that "towns benefit and rural areas are suppressed". Therefore, if more credit resources flow to urban sectors or capital-intensive sectors, financial expansion may increase the difference in income responses between urban and rural areas, thus constraining the goal of common prosperity.

Keywords: Common Prosperity; Urban–rural Income Gap; Credit Expansion

1 Introduction

A core task of achieving common prosperity is to continuously narrow the income gap between urban and rural residents. In this process, people have high expectations for the financial system: a more sufficient credit supply can usually ease financing constraints, promote investment and employment, and thus increase residents' income. However, under the condition that the dual structure of urban and rural areas still exists and the allocation of financial resources is obviously biased, credit expansion may not naturally bring more inclusive income growth (Allen, Qian, & Qian, 2005)[1].

If the loans mainly flow to urban enterprises, real estate, and government financing platforms, urban residents are more likely to benefit directly. On the contrary, rural

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areas often find it more difficult to obtain financial services because of insufficient collateral, asymmetric information, and high transaction costs. At the same time, in the process of factor reconfiguration, rural areas may also be affected by the crowding-out effect (Stiglitz & Weiss, 1981; Li & Zhu, 2010).[2][3]

Therefore, a question that is highly related to the goal of common prosperity and needs empirical test is: Does credit expansion at the county level promote the convergence of urban and rural income, or does it strengthen urban-rural differentiation? To answer this question, this paper constructs panel data with counties as observation units, estimates the responses of urban income and rural income to credit expansion respectively, and directly compares the elastic differences between urban and rural areas under the same regression framework through a stacked design, thus reducing the comparability bias caused by differences in model specification. The main findings of this paper are as follows: credit expansion significantly increases the income of urban residents, but it is negatively correlated with the income of rural residents. The difference between urban and rural areas is significant and steady.

2 Literature Review

Common prosperity can usually be understood as two points: income distribution is more balanced and the fruits of growth are more widely shared. Some studies believe that financial deepening can reduce inequality. The reason is that financial deepening can ease credit constraints and promote investment in education and entrepreneurship. When low-income groups lack collateral, so it is difficult to invest in education or high-return projects, the expansion of financial intermediaries can expand their choices, thus bringing more inclusive growth paths (Galor & Zeira, 1993; Banerjee & Newman, 1993)[4][5]. Some scholars also believe that there may be a threshold effect in financial development, or a process of "rising first and then falling". In the stage of imperfect financial system and obvious stratification of access, newly added financial resources are more likely to be obtained by high-income groups first, so inequality may expand (Greenwood & Jovanovic, 1990)[6]. Some empirical studies have also found that changes in the financial system will change the income distribution of different income groups (Beck, Levine, & Levkov, 2010)[7]. Relevant reviews also point out that the empirical conclusion between finance and inequality depends to a great extent on factors such as financial structure, supervision quality, and initial distribution pattern (Claessens & Perotti, 2007)[8].

Some studies also emphasize that in an environment with weak institutions or distorted resource allocation, financial expansion may first strengthen existing advantaged groups, thus increasing distributional disparities. In policy practice, this is often manifested as: the total amount of credit is increasing, but the performance of inclusiveness is not improving simultaneously, leading to a structural contradiction of "financial deepening but insufficient inclusiveness" (Claessens & Perotti, 2007; Beck et al., 2007)[8][9].

When policy-oriented financial expansion does ease the constraints on rural financial supply, rural development and welfare may be significantly improved. However, if financial expansion occurs mainly in cities, or is mainly absorbed by existing advantaged sectors, then the distributional outcome may be the opposite. Taking India's "social bank" experiment as an example, the expansion of rural banks has exerted a substantial influence on poverty reduction and development, which shows that financial coverage itself is crucial for distribution (Burgess & Pande, 2005)[10]. This kind of evidence also suggests that if the credit expansion in a country (or during a period) does not significantly improve the availability of rural finance, its contribution to common prosperity may be limited, and the urban-rural gap may even be widened due to allocative biases. There are also some relatively recent studies that take "common prosperity" or "rural common prosperity" as the explained variables and discuss the impact of digital finance or financial availability on it. This provides further scope for this paper to discuss the distributional consequences of credit expansion from the perspective of the urban-rural gap (Wang, X., Li, X., & Zhou, H., 2025)[11].

3 Data, Variables, and Descriptive Statistics

3.1 Data and Samples

This study utilizes panel data from the China County Statistical Yearbook, covering the period from 2000 to 2024. The core variables include the income of urban and rural residents, per capita loans, per capita fiscal revenue, per capita investment in fixed assets, and per capita GDP. The sample comprises approximately 62,230 county-year observations (which expands to about 124,458 observations when urban and rural samples are combined in the stacked regression framework).

3.2 Variable Definitions

Explained Variable:

$\ln(UrbanIncome_{it})$: Disposable income per capita of urban residents (logarithm).

$\ln(RuralIncome_{it})$: Disposable income per capita of rural residents (logarithm).

Core Explanatory Variables:

$\ln(LoansPC_{i,t-1})$: Per capita loan balance (logarithm, lagged one period).

Control Variables (all in logarithms):Per capita fiscal revenue, per capita investment, per capita GDP, etc.

Robustness Alternative Variable: Per capita deposit (logarithm, lagged one period).

3.3 Descriptive Statistics

As can be seen from **Table 1**, all main variables are in logarithmic form. In the sample:

The mean of the log of urban income is 9.782;

The mean of the log of rural income is 8.872;

The mean of the log of per capita loans is 9.368.

The control variables (such as per capita fiscal revenue, with a mean of 6.941; per capita investment, with a mean of 9.531; and per capita GDP, with a mean of 10.036) exhibit noticeable variation across counties. The standard deviations of these variables are around 1, indicating sufficient cross-sectional variation among counties, which is beneficial for model identification.

Table 1. Descriptive Statistics (log variables)

	count	mean	sd	min	p50	max
ln(Urban disposable income, yuan)	62230	9.782	0.608	7.646	9.767	11.323
ln(Rural disposable income, yuan)	62230	8.872	0.837	6.384	8.939	10.859
ln(Loans per capita, yuan)	62229	9.368	1.327	5.644	9.408	13.264
ln(Fiscal revenue per capita, yuan)	62229	6.941	1.340	3.456	7.040	10.457
ln(Investment per capita, yuan)	62229	9.531	1.512	4.027	9.770	13.478
ln(GDP per capita, yuan)	62230	10.036	1.078	6.998	10.108	13.514
Observations	62230					

4 Empirical Strategy

4.1 Benchmark Regression by Urban and Rural Areas

A two-way fixed effects model is estimated separately for urban and rural areas:

$$\ln(Income_{it}^{s})=\beta^{s}\ln(LoansPC_{i,t-1})+\gamma' X_{it}+\mu_i+\lambda_t+\varepsilon_{it},$$

Where, $s\in\{urban,rural\}$, μ_i denotes county fixed effects, λ_t denotes year fixed effects. Standard errors are clustered at the county level.

4.2 Stacked and Normalized Urban-Rural Comparison

To directly compare urban-rural disparities within the same model, a stacked sample is constructed by duplicating each county-year observation into two records: one for the urban sector and one for the rural sector. Let $Rural_s$ be a dummy variable for the rural sector. The specification is as follows:

$$\ln(Income_{it}^{s})=\beta\ln(LoansPC_{i,t-1})+\delta(Rural_s\times\ln(LoansPC_{i,t-1}))+\theta' X_{it}^{s}+\alpha_{i\times s}+\tau_{t\times s}+\varepsilon_{it}^{s}$$

Here, $\alpha_{i\times s}$ (county × sector fixed effects) and $\tau_{t\times s}$ (year × sector fixed effects) ensure that urban and rural areas are comparable with respect to unobservable county-specific factors and sector-level common shocks. The coefficient δ represents the differential effect for the rural sector relative to the urban sector.

5 Empirical Results

5.1 Baseline Results

Column (1) of **Table 2.** shows: The coefficient of per capita loans (t−1) on urban income is 0.082 ($p<0.01$). This implies that, after controlling for county and year fixed effects along with a set of economic variables, a 1% increase in per capita loans is associated with an average increase of approximately 0.082% in urban residents' income in the following year.

Column (2) of **Table 2.** shows: The coefficient of per capita loans (t−1) on rural income is −0.027 ($p<0.01$). That is, a 1% increase in per capita loans is associated with an average decrease of approximately 0.027% in rural income in the following year (a negatively significant response).

Column (3) of **Table 2.** further presents the urban-rural disparity from the stacked regression: The baseline elasticity for urban areas is 0.082 ($p<0.01$), while the urban-rural differential term δ is −0.109 ($p<0.01$).

Table 2. Loan expansion and income (two-way FE, stacked-consistent sample).

	(1)	(2)	(3)
	Urban income	Rural income	Stacked (Urban vs. Rural)
Urban slope: ln(Loans per capita), t-1	0.082***	-0.027***	0.082***
	(0.010)	(0.010)	(0.010)
ln(Fiscal revenue per capita, yuan)	-0.024***	0.022**	-0.024***
	(0.009)	(0.009)	(0.009)
ln(Investment per capita, yuan)	0.021***	0.029***	0.021***
	(0.007)	(0.007)	(0.007)
ln(GDP per capita, yuan)	0.054***	0.154***	0.054***
	(0.014)	(0.013)	(0.014)
Rural - Urban: ln(Loans pc), t-1			-0.109***
			(0.014)
1.Rural # ln(Fiscal revenue per capita, yuan)			0.046***
			(0.012)
1.Rural # ln(Investment per capita, yuan)			0.009
			(0.010)
1.Rural # ln(GDP per capita, yuan)			0.100***
			(0.019)
_cons	8.449***	7.146***	7.798***
	(0.145)	(0.127)	(0.099)
N	62229	62229	124458
R2	0.801	0.944	0.924

The results indicate that the response of rural income to credit expansion is significantly weaker than that of urban income, with a magnitude approximately 0.109 lower. Combined with the urban baseline elasticity of 0.082, the corresponding elasticity for the rural sector can be derived as $0.082 - 0.109 = -0.027$. This is entirely consistent with the separate urban and rural regressions, confirming that the results are highly comparable and not driven by differences in model specification.

Furthermore, there are notable differences in the control variables between urban and rural areas. For instance, in the stacked model, the slopes for fiscal revenue and per capita GDP differ significantly between the rural and urban sectors (as shown by the interaction terms in the table). This indicates that the determinants of income are not identical across urban and rural areas, justifying the use of the stacked and harmonized framework for urban-rural comparison.

5.2 Visualization

To make the urban–rural contrast more intuitive, Fig. 1 visualizes the estimated coefficients of credit expansion for the two groups together with their 95% confidence intervals. The figure provides a compact graphical summary of the regression results reported in Table 2. Specifically, the estimated coefficient for urban residents is positive and statistically significant, whereas the coefficient for rural residents is negative and statistically significant. The confidence intervals show very limited overlap, indicating that the difference in income response between the two groups is not only economically meaningful but also statistically well identified.

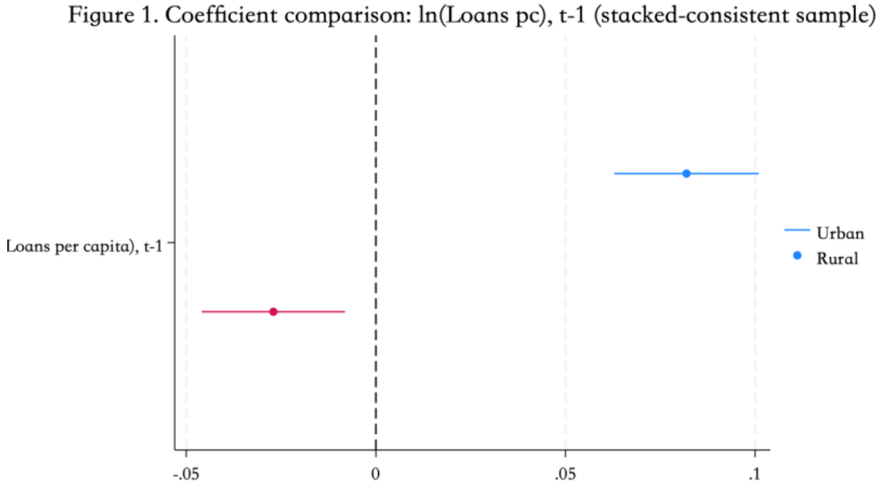

Fig. 1. Compares the estimated coefficients and confidence intervals for ln(*LoansPC*) between urban and rural areas. The coefficient for urban areas is significantly positive, while that for rural areas is significantly negative, with little to no overlap in their confidence intervals. This visualization strongly reinforces the key conclusion drawn from Table 2.

6 Robustness Checks

Table 3. reports multiple sets of alternative specifications, and the main conclusions remain largely robust.

1)Using current-period loans (t) instead of the lagged term:

Urban: coefficient 0.095 ($p<0.01$);

Rural: coefficient −0.032 ($p<0.01$).

The direction and statistical significance remain consistent, indicating that the results are not driven by the lag specification.

2)Excluding per capita GDP as a control:

Urban (t−1): coefficient 0.087 ($p<0.01$), still significantly positive;

Rural (t−1): coefficient −0.012, no longer significant.

This result at least suggests that the significantly negative effect in rural areas may be closely linked to macroeconomic development levels (or structural factors highly correlated with them). Meanwhile, the positive effect in urban areas remains robust.

3)Using per capita deposits (t−1) in place of per capita loans (t−1):

Urban: coefficient 0.067 ($p<0.01$);

Rural: coefficient −0.031 ($p<0.05$).

Even with this alternative measure of financial scale, the urban–rural positive–negative divergence persists, indicating that the conclusion is not dependent on a single financial variable definition.

Table 3. Robustness checks.

	Urban (t)	Rural (t)	Urban (t-1, no pgdp)	Rural (t-1, no pgdp)	Urban (dep t-1)	Rural (dep t-1)
ln(Loans per capita, yuan)	0.095***	-0.032***				
	(0.010)	(0.010)				
ln(Loans per capita), t-1			0.087***	-0.012		
			(0.010)	(0.010)		
ln(Deposits per capita), t-1					0.067***	-0.031**
					(0.014)	(0.013)
ln(Fiscal revenue per capita, yuan)	-0.032***	0.023***	-0.015*	0.046***	-0.016*	0.020**
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.008)
ln(Investment per capita, yuan)	0.017**	0.030***	0.026***	0.045***	0.021***	0.030***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.008)	(0.007)
ln(GDP per capita, yuan)	0.058***	0.155***			0.055***	0.155***
	(0.015)	(0.013)			(0.014)	(0.013)
Constant	8.342***	7.133***	8.831***	8.234***	8.505***	7.179***
	(0.147)	(0.128)	(0.105)	(0.112)	(0.167)	(0.137)
N	64934	64934	62229	62229	62228	62228
R2	0.797	0.943	0.801	0.941	0.800	0.944

Overall, the robustness checks support the core finding of this paper: financial expansion at the county level is significantly positively correlated with urban income

growth, while the income response in rural areas is significantly weaker and, under most specifications, negative.

7 Discussion

1)Credit allocation is more skewed toward the urban sector.

Amidst the trade-off between risk and return, commercial banks and local financial institutions are more inclined to allocate loans to urban enterprises, public platforms, real estate, and other sectors where collateral is more readily available and risk assessment is easier. As a result, the urban sector is more likely to translate these inflows into increased investment, expanded employment, and rising wages, thereby transmitting the impact to household income.

2)Inadequate access to rural finance

If the credit supply within a county is not unlimited, newly available credit may first satisfy the financing needs of the urban sector. Small and medium-sized entities in rural areas will continue to face constraints such as insufficient collateral, information asymmetry, and higher transaction costs. Meanwhile, during the process of factor reallocation, rural areas may experience outflows of capital and labor, leading to a weaker—or even negative—response in rural income.

3)Indirect effects of structural transformation and factor mobility

Credit expansion may accelerate urbanization and industrial upgrading, attracting rural labor to urban areas. If the benefits of migration do not flow back to rural households in a timely and adequate manner, or if the income of the rural resident population is affected by the "left-behind" phenomenon in statistical terms, rural income growth may be suppressed.

8 Conclusions and Policy Implications

Credit expansion significantly increases the income of urban residents, whereas the response of rural residents' income is markedly weaker and, under most specifications, negative. The urban–rural disparity is also statistically significant. This result indicates that merely expanding the scale of credit does not necessarily lead to more inclusive income growth. On the contrary, without improvements in the allocation of credit resources and industrial structure, credit expansion may widen the urban–rural divide.

From a policy perspective, if the goal is to use finance to promote common prosperity or rural revitalization, two priorities should be emphasized:

(1) Optimize agricultural and rural credit supply and improve risk-sharing mechanisms to enhance the creditworthiness and accessibility of rural actors;

(2) At the county level, guide capital toward rural industrial chains and job-creating sectors, avoiding excessive concentration of credit expansion in urban asset-based sectors.

Disclosure of Interests

The authors declare no competing interests.

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