

# A study on the impact mechanism of common prosperity development based on the perspective of digital inclusive finance

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**Abstract.** It is an important mission of the Party Central Committee to gradually achieve common prosperity, and it is of great contemporary significance to investigate the mechanism of the impact of digital inclusive finance on common prosperity in depth. Based on the panel data of 31 provinces from 2011-2021, this paper uses the Entropy-Topsis method to measure and quantify the development level of common prosperity and conducts convergence and clustering analysis, and then uses the two-factor fixed effects model to explore the mechanism and heterogeneity of different factors on common prosperity. The empirical results show that: firstly, the development level of common affluence among regions is increasing and the gap is narrowing year by year, and the development of common affluence in economically developed regions is significantly better than that in economically backward regions; secondly, digital inclusive finance significantly promotes the development of common affluence; besides, innovation ability, openness to the outside world and urbanization level all play a significant positive role in the development of common affluence. Thirdly, from the perspective of heterogeneity, first, the breadth of coverage and depth of use of digital inclusion can effectively promote the development of common prosperity, and second, the promotion effect of digital inclusion is more obvious in East China and South China. Finally, combined with the empirical results, this paper puts forward relevant suggestions for realizing the high-quality development of common affluence.

**Keywords:** Digital Inclusive Finance, Common Prosperity, Entropy-Topsis Method, Two-Factor Fixed Effects Model.

## 1. Introduction

Achieving common prosperity is the unremitting pursuit of the Chinese people. After completing the goal of getting rid of absolute poverty such as precise poverty alleviation and poverty eradication and achieving the great result of building a moderately prosperous society, gradually realizing common prosperity becomes the next goal of China's development. In recent years, digital inclusive finance has become an important part of the modern financial system, with the role of promoting economic growth, alleviating poverty, and reducing regional differences in poverty levels (Yao Fengge and Li Lijia, 2020) [1]. It needs to study how to give full play to the positive role of digital inclusive finance and explore the factors influencing the realization of common prosperity, to effectively promote the development of common prosperity, which is of great significance to promote the further development of digital inclusive finance, consolidate the achievements of the overall well-off society and realize the common prosperity of all members of society as soon as possible.

With the reintroduction of the goal of "common prosperity" in the 14th Five-Year Plan, many scholars have begun to pay attention to the quantification of common prosperity, but there is no unified standard for the level of common prosperity in China. However, there is no unified standard

for measuring the level of common prosperity in China. Liu Peilin et al. (2021) [2], based on the discussion of the connotation of common affluence, construct the indicator system of common affluence more comprehensively from two dimensions of overall affluence and the sharing of development achievements; Li Shi (2021) [3] points out that the evaluation system of common affluence level needs to be based on the living standard and sharing degree of the whole society, and proposes that income, property and the level of public services enjoyed are the best indicators of affluence. Besides, some scholars have explored the impact effects on common affluence from factors such as the level of foreign openness (Zhang Erxia et al., 2022) [4], the quality of higher education (Lan Yongfu, 2023) [5], and urbanization (Sun Xuetao et al., 2022) [6].

In recent years, digital inclusive finance has gradually become the focus of social attention. A large number of scholars have studied digital inclusive finance to narrow the urban-rural income gap (Song Ke et al., 2022) [7], promote the upgrading of residents' consumption (Tang Yong et al., 2021) [8], and boost the upgrading of industrial structure (Ge Heping and Zhang Li, 2021) [9]. For digital economy development, Xia Jiechang and Liu Cheng (2021) [10] identify the path of achieving common affluence from the perspective of the digital economy and find that the digital economy can promote the equalization of basic public services, contributing to the development of regional common prosperity.

The marginal contributions of this paper mainly exist in: first, considering the existing literature on the quantitative study of common affluence, constructing a provincial common affluence evaluation system, measuring the level of common affluence in 31 domestic provinces from 2011 to 2021, and analyzing the development trend of common affluence in more depth by calculating its coefficient of variation and convergence coefficient for convergence analysis, to analyze the development trend of common affluence in a more comprehensive research perspective. We also analyze the development of common prosperity at the present stage and provide a reference basis for evaluating the performance of government governance and examining the development of common prosperity in each place. Secondly, based on the perspective of digital inclusive finance, we study empirically the effects of different factors on common prosperity, summarize the mechanism of the effects, and analyze the differences in the effects of different regions, which will enrich the research on this field at the macro level of the country at this stage.

## **2. Theoretical research and experimental design**

### **2.1. Theoretical analysis and research hypothesis**

Common prosperity is the essential requirement of socialism in China, and its connotation can be divided into two aspects: the improvement of income level and the fair distribution of income. Common prosperity is the organic unity of "common" and "affluence", where "common" is the systematic reflection of production relations in various fields, and "affluence" is the comprehensive reflection of the level of productivity in the whole society. Liu Peilin et al. (2021) [2] points out that the essence of common affluence is that under the socialist system with Chinese characteristics, all people create a leading level of productivity and share a happy and beautiful life, and also analyze the specific connotation of common affluence from three levels: political, economic and social, respectively. Wan Haiyuan and Chen Jiping (2021) [11] also believe that the two dimensions of common prosperity are "development" and "sharing".

The literature suggests that digital inclusive finance helps to promote overall economic development and shared development outcomes, which in turn promotes common prosperity development. Feng Xingyuan et al. (2021) [12] define digital inclusive finance as the digital access and utilization of various financial services by all populations, especially those excluded or underserved by the formal financial sector. Digital inclusive finance has an impact on high-quality economic development in two dimensions: economic quality and efficiency and economic development concept (Ma Huanglong and Qu Xiaoe, 2021) [13]. In terms of macroeconomic development, digital inclusive finance also contributes to stabilizing economic development and

improving the efficiency of financial resource allocation (Dupas and Robinson, 2013) [14]. Digital inclusive finance accelerates the development of inclusive business with the help of digital means, brings into play the advantages of low cost, high efficiency, and full coverage of financial services, eases the financing constraints of socially disadvantaged groups, facilitates financing for almost everyone, and reduces the income gap between regions and urban and rural areas (Guo Feng and Wang Yaopei, 2020) [15].

Comrade Deng Xiaoping once put forward the idea of "the rich first drive the rich later", and there are significant differences in the level and speed of development of inclusive finance in rural areas of different provinces in central China (Li Mingxian and Tan Sichao, 2018) [16], and the results of Shen Li et al. (2019) [17] also show that there are significant regional differences in the development of inclusive finance in China. In addition, common prosperity is also influenced by many other factors, so this paper introduces the variables of innovation capacity, level of openness, and level of urbanization, and jointly explores the impact effect and mechanism of the development of common prosperity in combination with digital financial inclusion. In summary, the following assumptions are made in this paper.

H1: The development of digital inclusive finance helps to promote common prosperity.

H2: Innovation capacity, foreign openness level, urbanization level and human capital all contribute positively to the development of common wealth.

H3: The extent to which digital inclusive financial development promotes shared prosperity is heterogeneous by region.

## 2.2. Research Design

### 2.2.1. Variable Description

Explained variable: common affluence index. Based on the above analysis of the connotation of common affluence, the common affluence index system should include two dimensions: the overall affluence and the degree of fruit sharing. Among them, overall affluence includes both material and spiritual affluence, which means gradually promoting spiritual affluence based on achieving material affluence so that people can obtain happiness. On this dimension, refer to the study of Wang Shaojung and Yang Xueru (2022) [18] to measure the overall affluence by income level and basic public services. Referring to Liu Peilin et al. (2021) [2]'s study, the dimension of the degree of shared outcomes is measured by three sub-dimensions of population balance, regional disparity, and urban-rural disparity. The resulting system of common affluence indicators is shown in Table 1. In this study, the Entropy-Topsis model is used as the measurement method, to calculate the common affluence index for each place.

Core explanatory variable: digital financial inclusion index. This paper adopts the Digital Inclusive Finance Index 2011-2021 measured by the Digital Finance Research Center of Peking University as a measure of the development level of digital inclusive finance, which is derived based on three dimensions of digital inclusive finance coverage, depth of use and digitization as well as 33 specific indicators, and more adequately reflects the overall development of digital finance. In addition, this paper will also use its sub-dimensional indicators of the breadth of coverage, depth of use, and digitization to portray the effect of digital inclusive finance on common prosperity from multiple perspectives.

Control variables. Common affluence is also influenced by other factors, and the control variables selected in this paper contain four aspects: first, innovation capacity, which is the first productive force and promotes the development of economic level and common affluence by enhancing production efficiency, and is measured by the natural logarithm of the number of patent applications granted to domestic applicants; second, the level of foreign openness, which is expressed by the ratio of total foreign trade imports and exports to the GDP of the year; third, urbanization level, expressed as the ratio of urban resident population to total resident population; and fourth is human capital, expressed as the number of students enrolled in general colleges and universities.

### 2.2.2. Convergence study method

To explore the degree of convergence of the development level of common prosperity in each province, this paper introduces three indicators, namely, the Theil index, the convergence coefficient, and the coefficient of variation, to measure the variability and deviation of the development level of common prosperity in each province to analyze the development trend of convergence in each province from 2011 to 2021.

(1) Theil index: the Theil index is introduced to measure the degree of variability of the development level of common affluence in each province in China with the following formula.

$$Tl = \frac{1}{n} \sum_{i=1}^n \left( \frac{CP_{\theta i}}{\overline{CP_{\theta}}} \times \ln \frac{CP_{\theta i}}{\overline{CP_{\theta}}} \right) \quad (1)$$

Where denotes the Theil index, which indicates the common affluence development index of its province, and  $\overline{CP_{\theta}} = \frac{1}{n} \sum_{i=1}^n CP_{\theta i}$  is the average of the common affluence index of each province in the country. The range of the value of Thiel's index is that the smaller the Thiel's index, the smaller the difference in the level of common prosperity development among provinces; the larger the Thiel's index, the larger the difference in the level of common prosperity development.

(2) Convergence coefficient: the convergence coefficient is introduced to measure the convergence characteristics of the development level of common affluence, and the formula is as follows.

$$\tau_{\theta} = \sqrt{\frac{1}{n} \sum_{i=1}^n \left( \ln (CP_{\theta i}) - \frac{1}{n} \sum_{i=1}^n \ln (CP_{\theta i}) \right)^2} \quad (2)$$

Where  $\tau_{\theta}$  denotes the convergence coefficient and  $CP_{\theta i}$  denotes the common prosperity development index of the  $i$ th province. The smaller  $\tau_{\theta}$  indicates a stronger convergence.

(3) Coefficient of variation: the coefficient of variation is introduced to measure the deviation of the level of common prosperity development with the following formula.

$$V_{\theta} = \frac{\sqrt{\frac{1}{n} \sum_{i=1}^n (CP_{\theta i} - \overline{CP_{\theta}})^2}}{\overline{CP_{\theta}}} \quad (3)$$

Where  $V_{\theta}$  denotes the convergence coefficient,  $CP_{\theta i}$  denotes the common prosperity development index of the  $i$ th province,  $\overline{CP_{\theta}} = \frac{1}{n} \sum_{i=1}^n CP_{\theta i}$  is the average of the common prosperity index of all provinces in the country. The smaller  $V_{\theta}$  indicates a stronger convergence.

## 3. Empirical Analysis

### 3.1. Data source and pre-processing

This paper takes 2011-2021 as the sample interval, selects 31 provinces as the sample (excluding Hong Kong, Macao, and Taiwan), standardizes the data, and transforms the data to a range with mean 0 and variance 1 by transforming the original data, and eliminates the effect of 0 and negative values. In this paper, we add a minimum unit value of  $\theta$  to the normalized data results to satisfy the operation requirements and take  $\theta = 0.0001$ . The calculation formula is as follows.

$$\text{Positive indicator: } X = \frac{x - \min}{\max - \min} + \theta \quad (4)$$

$$\text{Negative indicator: } X = \frac{\max - x}{\max - \min} + \theta \quad (5)$$

The panel data of 2011-2021 provinces are finally obtained by reasonable estimation of the missing data through interpolation and analogy. The data are mainly obtained from the China Statistical Yearbook of previous years, the China City Statistical Yearbook, the website of the National Bureau of Statistics, the statistical yearbooks of previous years of each province, the EPS database, and the database of Digital Finance Research Center of Peking University, etc.

### 3.2. Measurement results

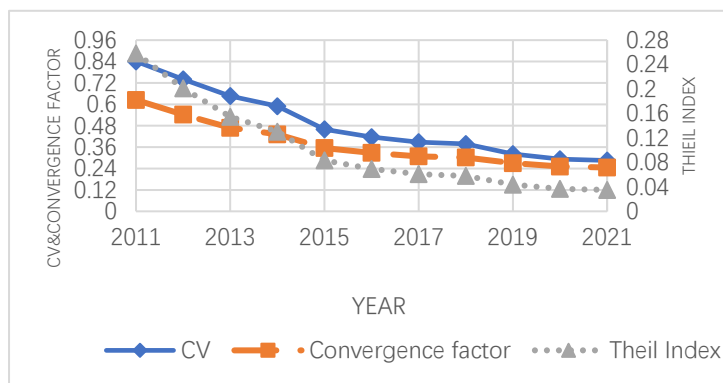
Based on the data, to achieve objective assignment, this paper adopts the Entropy-Topsis method for the assignment of index weights. The results are shown in Table 1, in the evaluation index system at the level of common prosperity, as well as the importance of indicators in order of urban-rural disparity > basic public services > regional disparity > per capita wealth level > labor production level > population balance. The difference between urban and rural minimum living security in the urban-rural gap accounts for the largest common affluence index and has the greatest impact on common affluence. The equalization of basic public services is the focal point for achieving common prosperity, and the solution of basic public services issues such as employment, income distribution, education, social security, medical care, housing, pension, and childcare promotes the solution of livelihood issues and lays a solid foundation for achieving common prosperity.

**Table 1.** Common Prosperity Indicator Weights

| Dimension         | Sub-dimensions        |                                                                  | Nature   | Weight (%) |
|-------------------|-----------------------|------------------------------------------------------------------|----------|------------|
| Overall affluence | Per capita wealth     | GDP per capita                                                   | Positive | 4.041      |
|                   |                       | Disposable income per inhabitant                                 | Positive | 3.685      |
|                   |                       | Per capita consumer spending                                     | Positive | 2.748      |
|                   |                       | Per capita fiscal expenditure                                    | Positive | 4.471      |
|                   | Basic Public Services | Education expenses                                               | Positive | 4.696      |
|                   |                       | Number of beds in medical institutions                           | Positive | 4.383      |
|                   |                       | Employment rate                                                  | Positive | 5.892      |
|                   |                       | Urban road area                                                  | Positive | 5.797      |
|                   |                       | Green space coverage                                             | Positive | 0.327      |
|                   | Labor production      | Total Labor Productivity                                         | Positive | 3.709      |
| Share the results | Crowd Balance         | Average wage to GDP per capita ratio                             | Positive | 3.619      |
|                   |                       | Gini coefficient of income                                       | Negative | 3.322      |
|                   | Regional Gap          | GDP per capita                                                   | Negative | 4.773      |
|                   |                       | disposable income per capita                                     | Negative | 2.691      |
|                   |                       | per capita consumer spending                                     | Negative | 2.970      |
|                   |                       | fiscal spending per capita                                       | Negative | 3.280      |
|                   |                       | education spending                                               | Negative | 4.658      |
|                   |                       | health care                                                      | Negative | 4.212      |
|                   |                       | employment rates                                                 | Negative | 5.939      |
|                   |                       | urban road area                                                  | Negative | 5.678      |
|                   |                       | green space coverage                                             | Negative | 0.321      |
|                   | Urban-rural gap       | Urban-rural per capita income difference                         | Negative | 2.757      |
|                   |                       | per capita consumption expenditure between urban and rural areas | Negative | 2.827      |
|                   |                       | urban and rural minimum living security                          | Negative | 13.205     |

### 3.3. Convergence test results

The results of convergence analysis are shown in Figure 1, it shows that the convergence coefficient, coefficient of variation and Theil index of the common prosperity index show a decreasing trend year by year, and the Theil index decreases from 0.26 in 2011 to 0.04 in 2021, and the Theil index takes 0.1 as the dividing line, and the development of China is more balanced after 2015.



**Figure 1.** Convergence analysis results

In terms of years, 2015 shows a rapidly declining trend of the index, and 2016-2021 are in a steady decline, which to a certain extent indicates that the regions with a more backward level of common prosperity in the early years, under the influence of policy support and the spread of digital inclusive finance, gradually accelerate the development speed and narrow the regional gap, showing considerable regional convergence. Specifically, the convergence analysis results correspond to the development of digital inclusive finance, and the development history of digital inclusive finance in China can be roughly divided into three stages: the starting period (2004-2012), the growing period (2013-2015), and the solid period (2016-present), with 2011-2012 in the initial stage, and some regions did not fully develop, so the index declined at a limited rate; 2013-2015 were in the growth period, and the promotion of digital inclusive finance policies and the role of inter-regional coordination and linkage mechanism resulted in an obvious and rapid decline in each index; 2016-2021 were in the solid period, and the index declined at a slower rate and showed a stable downward trend.

### 3.4. Results of panel data analysis

#### 3.4.1. Baseline regression results

In this paper, we utilize the following symbols to replace the variable names, Cp refers to common prosperity Index, Dif refers to digital inclusive finance index, Bc refers to breadth of coverage, Du refers to depth of use, Dd refers to degree of digitization, Hc refers to human capital, Ic refers to innovation capability, Fol refers to foreign openness level, Ul refers to Urbanization level.

Given the significant variability of the data in both the temporal and cross-sectional dimensions, the F-test and Hausman tests were conducted using SPSS PRO to determine the optimal model. According to the F-test and Hausman test, the F-test statistic is 39.846 and the Hausman test statistic is 117.586, both of which have a significant P-value of 0, thus, they are significant at the 1% level, and the original hypothesis is rejected and the FE model is selected.

The regression analysis was conducted using Stata 16, and the results are shown in Table 2. The coefficient of the Dif is positive, Dif is based on business sustainability as a concept, emphasizing "equal opportunity" to enjoy financial services, focusing on disadvantaged groups, mainly including low-income population and poor people striving to improve resource allocation efficiency and enhance social welfare, and the increase of social welfare directly promotes social equality and promote the process of common prosperity. The coefficient of the Ic is positive, innovation is the main driving force to promote the development of social production, driving the positive development of surrounding areas, and forming a positive spillover effect, is the surrounding areas have to follow the example of the region and promote the realization of common prosperity. The coefficient of Fol is positive, which helps to form a spillover effect, promote high-quality economic development, and promote the process of common prosperity. The coefficient of the Ul is positive, which means that the expansion of urbanization brings more people quality employment opportunities, promotes the increase of disposable income per capita, and plays an important role in the realization of common prosperity. The explanation for the negative Hc result is that there is a social phenomenon in China

that a large number of undergraduates and even master's students choose to work in government departments, state-owned enterprises, and other types of organizations after graduation, which leads to an excessive concentration of high-quality human capital in the government sector, which is not conducive to social innovation and economic development (Li, Shigang and Yi Heng, 2017) [19], and thus inhibits the regional common prosperity development level. The overall results suggest that hypothesis H1 holds, but H2 doesn't hold.

**Table 2.** Results of overall panel data analysis

|                         | (1)                     | (2)                     | (3)                     | (4)                     |
|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Dif                     | 0.0246***<br>(0.00782)  |                         |                         |                         |
| Bc                      |                         | 0.0394***<br>(0.0108)   |                         |                         |
| Du                      |                         |                         | 0.0116**<br>(0.00452)   |                         |
| Dd                      |                         |                         |                         | 0.00283<br>(0.00309)    |
| Ic                      | 1.194***<br>(0.246)     | 1.024***<br>(0.249)     | 1.183***<br>(0.248)     | 1.231***<br>(0.255)     |
| Fol                     | 0.397***<br>(0.00673)   | 0.399***<br>(0.00673)   | 0.397***<br>(0.00680)   | 0.394***<br>(0.00675)   |
| Ul                      | 0.470***<br>(0.0420)    | 0.403***<br>(0.0415)    | 0.480***<br>(0.0442)    | 0.449***<br>(0.0434)    |
| Hc                      | -0.0349***<br>(0.00584) | -0.0346***<br>(0.00575) | -0.0328***<br>(0.00577) | -0.0317***<br>(0.00589) |
| Area                    | FIXED                   | FIXED                   | FIXED                   | FIXED                   |
| Time                    | FIXED                   | FIXED                   | FIXED                   | FIXED                   |
| Constant                | -25.11***<br>(2.564)    | -20.48***<br>(2.480)    | -25.25***<br>(2.662)    | -23.63***<br>(2.742)    |
| N                       | 341                     | 341                     | 341                     | 341                     |
| R Square                | 0.976                   | 0.976                   | 0.976                   | 0.975                   |
| Adjusted R <sup>2</sup> | 0.972                   | 0.973                   | 0.972                   | 0.971                   |

Note: Standard errors in parentheses; \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

In terms of the sub-dimensions, digital inclusion's Bc and Du have a stronger effect on promoting common prosperity, with the Bc sub-dimension having a more obvious promotion effect, while the Dd has a less significant promotion effect. This may restrict residents' consumption expenditure, which in turn affects the release of digital financial inclusion dividends, resulting in the Dd that has not yet played a role in promoting common prosperity.

In addition to the above empirical analysis, this paper also conducted a cluster analysis for the level of common prosperity development in each province and concluded that: there are still gaps in the realization of common prosperity in China, and the more economically developed provinces such as Shanghai, Beijing, and Guangdong provinces are significantly higher than other provinces in the development level of common prosperity.

### 3.4.2. Heterogeneity analysis results

China is a vast country with a wide range of development levels between regions and significant differences in economic and social development levels. This paper analyzes the heterogeneity based on the geographical division of China into five major regions: East China, West China, South China, North China, and Central China. The results in Table 3 show that the promotion effect of Dif is more obvious in East China and South China. Among them, East China is significant at the 5% level except for Hc. In terms of Dif, Dif in West China presents insignificant results, which may be related to the late start and imperfect development of Dif in West China; in terms of Ic, East China and West China are significant at the 1% level. In terms of Fol, all five regions show significant results at the 1% level,

indicating that the Fol has led to a higher degree of inter-city linkage, which helps drive the common prosperity of the surrounding areas. In terms of Ul, the remaining regions except South China are significant at the 10% level. The insignificance of South China is affected by the regional imbalance, and the gap between Guangxi and Hainan is larger than that of Guangdong, resulting in insignificant results. Hc is only significant at the 1% level in South China. The results indicate that hypothesis H3 holds.

**Table 3.** Heterogeneity analysis results

|                         | (1)<br>East China    | (2)<br>West China     | (3)<br>South China     | (4)<br>North China    | (5)<br>Central China   |
|-------------------------|----------------------|-----------------------|------------------------|-----------------------|------------------------|
| Dif                     | 0.0721**<br>(0.0349) | 0.0220<br>(0.0142)    | 0.0613**<br>(0.0249)   | 0.0590***<br>(0.0187) | 0.0515***<br>(0.00586) |
| Ic                      | 1.424***<br>(0.527)  | 1.339***<br>(0.279)   | -5.149***<br>(1.415)   | -0.737<br>(0.699)     | -0.415<br>(0.246)      |
| Fol                     | 0.388***<br>(0.0119) | 0.326***<br>(0.0164)  | 0.518***<br>(0.0212)   | 0.417***<br>(0.0135)  | 0.189***<br>(0.00764)  |
| Ul                      | 0.248**<br>(0.113)   | 0.204**<br>(0.0845)   | 0.0474<br>(0.213)      | 0.458***<br>(0.115)   | 0.170*<br>(0.0803)     |
| Hc                      | 0.0367<br>(0.0234)   | -0.0158*<br>(0.00878) | -0.0957***<br>(0.0135) | -0.0167<br>(0.0269)   | -0.00431<br>(0.00369)  |
| Area                    | FIXED                | FIXED                 | FIXED                  | FIXED                 | FIXED                  |
| Time                    | FIXED                | FIXED                 | FIXED                  | FIXED                 | FIXED                  |
| Constant                | -26.34***<br>(8.537) | -11.74***<br>(4.146)  | 51.35**<br>(21.39)     | -14.38**<br>(7.196)   | 6.444<br>(5.095)       |
| N                       | 77                   | 110                   | 33                     | 88                    | 33                     |
| R Square                | 0.980                | 0.991                 | 0.996                  | 0.977                 | 1.000                  |
| Adjusted R <sup>2</sup> | 0.972                | 0.988                 | 0.992                  | 0.969                 | 1.000                  |

Note: Standard errors in parentheses; \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

### 3.4.3. Heterogeneity analysis results

**Table 4.** Robustness test results

|                         | (1)<br>One-period lag   | (2)<br>Winsorize       | (3)<br>Change the sample range |
|-------------------------|-------------------------|------------------------|--------------------------------|
| Dif                     | 0.0162**<br>(0.00722)   | 0.0373***<br>(0.00794) | 0.0296***<br>(0.00563)         |
| Ic                      | 1.352***<br>(0.220)     | 0.419*<br>(0.230)      | 1.095***<br>(0.206)            |
| Fol                     | 0.410***<br>(0.00628)   | 0.376***<br>(0.00795)  | 0.447***<br>(0.0106)           |
| Ul                      | 0.527***<br>(0.0386)    | 0.320***<br>(0.0431)   | 0.431***<br>(0.0381)           |
| Hc                      | -0.0270***<br>(0.00525) | -0.00696<br>(0.00707)  | -0.0142***<br>(0.00421)        |
| Area                    | FIXED                   | FIXED                  | FIXED                          |
| Time                    | FIXED                   | FIXED                  | FIXED                          |
| Constant                | -28.74***<br>(2.482)    | -11.25***<br>(2.853)   | -24.68***<br>(3.874)           |
| N                       | 310                     | 236                    | 186                            |
| R Square                | 0.980                   | 0.986                  | 0.985                          |
| Adjusted R <sup>2</sup> | 0.976                   | 0.983                  | 0.981                          |

Note: Standard errors in parentheses; \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

To address the possible endogeneity problems such as mutual causality and omitted variables in the baseline regression, this paper uses three methods to conduct robustness tests: constructing a one-period lagged instrumental variable method for the core variables, winsorize the core and control variables by upper and lower 5%, and changing the sample scope according to the characteristics of digital inclusive finance development. The results are shown in Table 4. The coefficients of Dif, Ic, Fol, and Ul are positive, and the coefficient of Hc is negative, which is consistent with the results of the previous generality analysis, among which the Ic and Hc, excluding the winsorize, are significant at the 5% significant level, which indicates that the results of the panel data analysis have certain robustness.

#### 4. Conclusions and Recommendations

Based on the perspective of digital financial inclusion, this paper uses the panel data of 31 provinces in China from 2011 to 2021 to measure and quantify the level of common prosperity and conduct convergence analysis and cluster analysis, and finally analyze the influence mechanism of different factors on common prosperity and its heterogeneity through empirical analysis. Based on the above research, we find that: First, the development gap between regions is narrowing year by year, the development level of common prosperity is increasing year by year; and the development of common prosperity in the more developed provinces is significantly better than that in the more backward provinces. Second, digital inclusive finance can significantly contribute to the development of common prosperity, and it can not only drive the prosperity of regions, but also deepen the degree of sharing the fruits of development among people in each region; in addition, innovation ability, openness to the outside world and urbanization level all play a significant positive role in the development of common prosperity, and the improvement of these three factors can promote the process of achieving common prosperity. Third, from the perspective of heterogeneity, the breadth of coverage and depth of use of digital inclusion can effectively promote the development of common affluence, among which the breadth of coverage sub-dimension has a more obvious promotion effect.

Based on the above research findings, this paper puts forward the following policy recommendations to give full play to the positive role of digital inclusive finance, consolidate the existing development achievements and help achieve common prosperity for all. Firstly, vigorously develop digital inclusive finance and deepen the digitalization and inclusive development of finance. On the one hand, the state should accelerate the construction of big data, cloud computing, and other Internet platforms, pay attention to the cultivation of relevant talents, continuously deepen the digital transformation and upgrading of the financial industry, and bring into play the greatest dividends that digital inclusive finance can bring; Secondly, emphasis should be placed on the development of innovation capacity, the level of foreign opening, and the level of urbanization to promote common prosperity through multi-channel development. While vigorously developing digital inclusive finance, the government should increase investment in scientific research, improve the level of foreign trade development, accelerate the construction of new urbanization, get rich with science and technology, generate income with trade, and promote the integration of urban and rural industries to achieve balanced regional development, thus promoting the development of common prosperity more efficiently. Thirdly, we should strengthen the existing foundation of common prosperity development and seriously implement the policy of "the rich first drive the rich later". The government should formulate differentiated digital policies to effectively guide financial institutions to provide financing to economically backward regions and support entrepreneurship and employment in poor regions and low-income people.

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