

Research on the Well-being Effects of Digital Financial Inclusion in China from a Common Wealth Perspective

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Abstract: The digital economy is an important force in promoting the achievement of common prosperity. It is conducive to accelerating the efficient flow of factors of production, promoting the sharing of high-quality resources, and advancing the equalisation of basic public services. This paper systematically reviews the well-being effects of digital inclusive finance (DIF) from the perspective of the commonwealth, classifies and summarises existing literature in the academic community, and focuses on the role and challenges it in reducing poverty and regional income disparities at the macro level, reducing household financial risks and enhancing household financial resilience at the micro level, as well as improving the sense of well-being of individuals' lives. The main findings suggest that DIF significantly improves the financial stability and economic resilience of low-income groups and promotes coordinated regional economic development and social well-being and stability. However, there are differences in the effects across regions and groups, and further research and practice are needed to address these differences. By integrating and sorting out various research results in the academic community, this study provides a concrete and theoretical explanation of the beneficial role that DIF plays in facilitating China's successful implementation of shared wealth, filling the gaps in the review-type literature in this field.

Keywords: Commonwealth, digital financial inclusion, well-being effect, literature review.

1. Introduction

Common prosperity is an important goal of modern socio-economic development in China. Its core lies in reducing income disparity and realising the fruits of economic development to be shared by the whole society. China's development goals are: by 2025, policy initiatives on the digital economy for common prosperity will be continuously improved; by 2030, a more comprehensive policy system on the digital economy for common prosperity will be formed, and significant results will be achieved in accelerating the bridging of gaps between regions, urban and rural areas, groups and basic public services.

With the rapid development of information technology, digital inclusive finance (DIF), as an emerging financial service model, is rapidly emerging globally, especially in developing countries and less developed regions. DIF makes use of the mobile Internet, artificial intelligence, and other technological means to provide financial services (FS) to those who are not covered by the traditional financial system. To some extent, this will bridge the fiscal divide and promote social equity and economic inclusion.

Existing studies show that DIF has significant effects in enhancing the availability of FS, promoting economic development, and alleviating poverty. Fu's research with information from a Chinese household panel study, found that DIF significantly reduces the economic vulnerability of households, with significant benefits for rural and low-income households in particular [1]. Pei's study further explored the spatial spillovers of DIF and found a significant positive spatial contribution in alleviating rural relative poverty [2]. However, there is a lack of articles that systematically summarise the various findings.

This paper will adopt a systematic review approach to analyse how DIF can reduce poverty and narrow regional income gaps at the macro level, reduce household financial risks and enhance household financial resilience at the micro level, and improve the sense of well-being of individuals' lives, and to explore its roles and challenges in realising the goal of shared prosperity. The research in this paper can provide policymakers and financial institutions with theoretical support and practical guidance, promote DIF to better serve the common wealth and social well-being, and help achieve national development goals.

2. The relationship between DIF and shared prosperity

2.1. Research Hotspots and Cluster Analysis in the Field of DIF

Cluster analysis is one of the important functions of CiteSpace software, where different networks are clustered to identify current research hotspots. CNKI not only has the most comprehensive Chinese literature resources but also covers a large number of English literature, making it an important and authoritative comprehensive database platform for domestic and foreign scholars to conduct Chinese and English academic retrieval and research.

Table 1 presents the clustering analysis of literature on DIF on CNKI from 2021 to 2024. Among the top 10 clusters: rural revitalisation (#0), common wealth (#1), mediation effect (#2), threshold effect (#3), financial inclusion (#4), financing constraints (#5), digital economy (#6), digital finance (#7), human capital (#8), and technological innovation (#9). By observing the clustering results, it is better able to identify the hottest research trends in this area and have a more intuitive grasp of the research hotspots.

Table 1: Top 10 Clusters of DIF Literature on CNKI from 2021 to 2024.

Serial number	Cluster name	Cluster size	Average profile value
1	Rural rejuvenation	46	0.43
2	mutual enrichment	39	0.37
3	intermediary effect	26	0.35
4	threshold effect	18	0.09
5	inclusive finance	17	0.27
6	Financing constraints	17	0.13
7	digital economy	11	0.15
8	digital finance	11	0.05
9	human capital	10	0.05
10	technological innovation	8	0.08

2.2. Connotations and Linkages Between DIF and Common Wealth

Commonwealth is the essential requirement of socialism, embodying the goal of sharing the benefits and progress of all people. It emphasises not only the affluence of material life but also the richness of spiritual life. Attaining shared prosperity entails bridging the economic divide between the wealthy

and the impoverished, enhancing the standard of communal services and the communal environment, and fostering the material and spiritual well-being of the populace [3].

In the past few years, the notion of "DIF" has increasingly gained momentum. This concept pertains to the delivery of FS through digital means, including the Internet, mobile telephony, large datasets, and cloud-based computing. The objective is to facilitate access to affordable and convenient financial solutions for a broader demographic, particularly targeting low-income individuals, micro, small, and medium-sized enterprises, as well as inhabitants of geographically remote regions that are typically underserved by conventional financial systems. The primary features of DIF are its extensive reach, profound utilization, and user-friendly nature [4].

DIF undoubtedly plays a significant role in promoting the realization of the commonwealth by optimizing the allocation of financial resources, lowering financing costs, increasing opportunities for entrepreneurship and innovation, ultimately raising the income level of low-income groups, and narrowing the income gap. The development of DIF, with its income-enhancing and consumption-pulling effects, not only drives economic growth but also advances the general shared development of society, according to preliminary studies in the literature [4].

3. DFI Narrows the Urban-Rural Divide and Alleviates Poverty

3.1. DIF and Poverty Reduction Effects

Initially, examining the issue through a lens of globalization, Amaliah explores the effect of DIF on poverty reduction by conducting an analysis of panel data spanning 2000 to 2020, encompassing 123 developing nations. This analysis employs a dynamic generalized method of moments (GMM) for estimation [5]. The results of the study show that DIF significantly reduces the poverty rate and there is a mutually reinforcing relationship between the two. In addition, it is found that the effect of the development of DIF in poverty alleviation is more significant in low-income countries [5]. With a specific focus on China, particularly its economically challenged rural sectors, Pei conducted a study to examine the spatial spillover impacts of DIF on rural relative poverty [2]. The research developed a spatial econometric model, utilizing panel data from 31 provinces over the period of 2012 to 2019. The results indicate that the progression of DIF significantly curtails rural relative poverty and exhibits negative spatial externalities in surrounding areas. The study's conclusions imply that DIF not only aids in poverty reduction within the locale but also exerts a beneficial influence on adjacent regions [2]. In a related vein, Lee delved into the function of DIF in mitigating rural poverty, uncovering novel insights into its operational mechanism [6]. The research highlights that DIF facilitates access to more affordable financial products and services for the rural poor, enhancing their income and diminishing the prevalence of relative poverty through its convenience and accessibility [6]. In a more detailed analysis of the income level, Wang assessed the influence of DIF's growth on poverty alleviation by creating a K-LSTM-ECM model. The findings revealed that a quintupling of the DIF index corresponded with a rise in per capita disposable income from 18,000 yuan to 31,000 yuan [7].

3.1.1. Shortcomings and Deficiencies

The existing literature on the poverty reduction effects of DIF is relatively well-developed but still has some shortcomings. For example, Amaliah uses data from 2000 to 2020, which covers a long period, but as the pace of development and the scope of application of digital finance continues to expand over time, newer data may provide more insights [5]. In addition, although the article controls for multiple variables, there is still room to expand the choice of variables. For example, more socio-economic factors and changes in family structure can be considered for their impact on outcomes.

Although Zhang mentions differences in the impact of DIF across regions in his study, the specific reasons for these differences and challenges in policy implementation are not explored in depth [8].

3.1.2. Summary and Reflection

Collectively, the five studies underscore the pivotal role of DIF in alleviating poverty, demonstrating its capacity to elevate the income levels of economically disadvantaged groups and foster economic progress in adjacent areas via spatial spillover impacts. However, issues such as the digital divide and insufficient policy support should not be ignored. Future research and practice should pay more attention to how to solve these problems to better utilise the poverty reduction effect of DIF and achieve the goal of common prosperity. The existing studies are of high quality in terms of research perspectives, methodology, and data analyses, which provide new perspectives and empirical support for the study of the relationship between DIF and multidimensional poverty, and have important reference value for policy formulation and implementation.

3.2. DIF and the Urban-rural Divide

Li examined the influence of DIF on the income distribution between urban and rural areas by conducting an analysis of data across China's 31 provinces from 2011 to 2019 [8]. The research revealed that DIF exerts a beneficial localized impact on rural economic growth, with its spatial spillover effects surpassing those of conventional financial systems. Furthermore, DIF exhibits spatial spillover properties that contribute to narrowing the rural-urban income disparity, a feature that is not present in traditional financial practices [8]. In a separate publication by the same author in the *Geo Journal* from the same year, the author explores the disparity in economic advancement and DFI between China's eastern and western regions using spatio-temporal data analysis techniques [9]. The study reveals that while DFI contributed to bridging the economic divide between the eastern and western parts of the country, the disparity in economic development between these regions has widened in the aftermath of the COVID-19 pandemic [9]. The development of DIF is more significant in the eastern region, while the development of the western region is relatively lagging. Wang used an econometric model to analyse the impact of DIF on the urban-rural income (URI) gap based on national panel data from 2011 to 2021, and conducted a robustness analysis by substituting the explanatory variables and adding control variables, as well as an analysis of heterogeneity in the eastern, central and western regions [10]. The findings indicate that DIF markedly diminishes the disparity in income between urban and rural areas. Moreover, the study highlights a pronounced convergence impact of DIF on the URI divide across various dimensions and roles, with this influence exhibiting regional variations [10].

Investigating the underlying impact mechanism, Liu conducted research on the influence of DIF on the URI disparity [11]. Utilizing empirical data from China, the study employed the spatial Durbin model (SDM) and a mediation effect model to explore the spatial dynamics of DIF in alleviating the URI gap. The results revealed that DIF effectively narrows the URI gap by facilitating the upgrade of industrial structures and exerts a positive spatial spillover influence [11]. In a related study, Shen put forth an additional pathway of impact [12]. By analyzing city-level panel data, Shen's research assessed the effect of DIF on the URI divide in China. The findings indicate that DIF plays a significant role in diminishing the URI gap, with its primary mechanism being the enhancement of economic growth. The study demonstrates that DIF has a marked positive impact on narrowing the URI gap, as evidenced by both the substitution of core explanatory variables and heterogeneity analysis. Additionally, the research suggests appropriate measures to foster the advancement of DIF and further mitigate the URI disparity [12].

3.2.1. Shortcomings and Deficiencies

Although Liu's study considered the spatial spillover effect, the heterogeneity of different regions is not sufficiently considered in the specific analyses [11]. There are significant differences in the level of economic development and digital infrastructure development among Chinese provinces, and these differences may affect the implementation of DIF. Future research can further break down regions to explore the specific impact mechanisms of DIF in different types of regions. In addition, Wang used data from 2011 to 2021, but as the pace of development and the scope of application of digital finance continue to expand over time, more up-to-date data may be needed in the future to validate the continuity of the study's conclusions and the trend of change [10].

3.2.2. Summary and Reflection

In summary, the findings collectively highlight the significant contribution of DIF to income distribution, capable of elevating the income levels of low-income populations and reducing the disparities between urban and rural areas as well as across different regions. Nonetheless, challenges such as the digital divide and regional economic imbalances cannot be dismissed. Future scholarly inquiry and practical applications should focus more intently on strategies to overcome these challenges, thereby optimizing the role of DIF in income distribution and progressing toward the objective of shared prosperity.

4. DFI Enhances Household and Individual Well-Being

4.1. DIF Mitigates Household Financial Risk

Fu's research investigates the impact of DIF on diminishing household economic fragility through an analysis of data from the Chinese Household Tracking Survey [1]. The findings indicate that households availing themselves of digital FS experienced a median increase in their liquidity of 12 percent and their financial cushions by 20 percent. Rural and economically disadvantaged households reaped the greatest benefits, markedly enhancing their financial stability and robustness. The study underscores the critical nature of enhancing financial education and refining the design of financial products, suggesting that policymakers and financial organizations should place a high priority on advancing DIF [1]. Ma's research arrives at analogous findings upon investigating the effect of DIF on alleviating household poverty, utilizing data from the China Family Panel Studies (CFPS) [13]. The analysis reveals that DIF markedly enhances the reduction of household poverty, particularly for those in rural areas and among low-income households. The study, through empirical examination, indicates that DIF strengthens the economic robustness and risk-bearing capacity of households by enhancing their access to FS and diminishing financial expenses and hazards [13]. Curiously, the findings presented by Ding diverge somewhat from the conclusions of the two prior studies, a discrepancy that may be attributed to systematic data errors [1, 13, 14]. Utilizing the China Household Finance Survey (CHFS) data, Ding explores the function of DIF development in fostering household entrepreneurship, as well as its influence on income enhancement and the reduction of asset poverty among the populace. The research indicates that DFI exerts a notable influence on poverty reduction. In the mechanism analysis, the effect of DIF on alleviating income and asset poverty through the facilitation of household entrepreneurship is estimated at 2.97% and 9.27%, respectively. In the heterogeneity analysis, DIF is found to make a significant contribution to reducing income poverty among rural dwellers and to have a more pronounced impact on alleviating asset poverty among urban residents. This study enriches the existing literature on DIF's role in promoting entrepreneurship and, consequently, poverty reduction, and offers theoretical foundation and empirical guidance on the use of financial tools for poverty alleviation [14].

In addition to the conclusions drawn from the above studies on the heterogeneity of household wealth levels, some other studies focus on the level of education and financial literacy. For example, Pan examines the impact of DIF on household income levels and property income ratios based on data from the 2011-2019 CHFS. The results of the study show that the development of DIF significantly promotes the increase of household income level and the proportion of property income, and that digital competence and financial literacy play a positive moderating role in this process [15]. Based on the data from Peking University's DIF Index (DIFI) and the CHFS, Li empirically examines the impact of digital finance on the financial vulnerability of households by using a variety of statistical methods such as the ordered probit model and mediated effect model, and empirically tests the impact of digital finance on household financial vulnerability and deconstructs its mechanism of action from the dual perspective of assets and liabilities. It is found that digital finance is conducive to reducing household financial vulnerability, which is reduced through the wealth appreciation effect and asset restructuring effect, but exacerbated through the financial leverage effect. Heterogeneity analyses show that the role of digital finance in reducing household financial vulnerability is stronger in households where the head of the household has a higher level of education and a higher level of income, as well as in households in areas with a lower level of traditional financial development [16].

4.1.1. Shortcomings and Deficiencies

In addition to the constructive conclusions and contributions mentioned above, the common problems of the above-related literature include, firstly, the data selected in the articles are relatively old, mostly before 2021. However, as time passes and the development speed and application scope of digital finance continue to expand, more up-to-date data may be needed in the future to verify the continuity and changing trend of the research conclusions, and newer data may also provide more current conclusions. Second, although the article analyses regional heterogeneity, the specific reasons for differences in the level of digital finance development in different regions and challenges in policy implementation are not explored in depth.

4.1.2. Summary and Reflection

In essence, the current scholarly work on DIF and household financial risk exhibits a high standard in terms of research angles, methodological approaches, and data scrutiny. It offers novel insights and empirical evidence to enhance the understanding of the influence of digital finance on household financial fragility. Concurrently, these studies hold significant relevance for the creation and execution of policies, furnishing valuable theoretical and applied insights to advance the progression and refinement of digital FS. However, there is still a need to further update the data and expand the research variables to provide more comprehensive insights. In addition, policymakers should focus on financial literacy education and financial product design to further enhance the coverage and effectiveness of digital FS.

4.2. DIF for Well-Being and Social Stability

At the social level, Wang analyses the impact of DIF on social well-being from the perspective of the commonwealth using provincial panel data for each province in China between 2011 and 2020 and examines the moderating roles of the intensity of tax collection and the level of infrastructure in this process. The findings show that DIF significantly enhances the level of social happiness, and this process is realised through the promotion of commonwealth. At the same time, the intensity of tax administration weakens this facilitating effect, while the level of infrastructure strengthens it [17]. Focusing further on the household level, Du examines how DIF enhances household well-being by promoting household financial participation using data from the CHFS and the Peking University

DIF Index (PKU-DIFIC). The study found that DIF significantly increased family well-being, with the probability of family well-being increasing by 16.74 percent for each additional unit (i.e., 100) of DIF. In addition, the study showed that households with lower levels of education and income benefit more from DIF [18].

Li, on the other hand, tries to explore the path of its action by using Chinese provincial panel data from 2013 to 2019 to measure the welfare index of each province comprehensively through the indicators of income, employment, housing, education, and healthcare and analyses the impacts and mechanisms of DIF on welfare by using a panel data model and regression of recentring influence function (RIF). The findings show that DIF significantly improves the welfare of Chinese residents in terms of income, employment, housing, education, and healthcare, and contributes more in the central and western regions. However, this mechanism also exacerbates the welfare imbalance between the central and western regions and the eastern region [19].

Liu's research centers on the income aspect within the aforementioned indicators. By utilizing data from the 2015-2019 CHFS, he investigated the influence of DIF on the income of residents and their income composition from a microeconomic standpoint, employing the OLS fixed effects model and the panel Tobit model. The study reveals that DIF markedly elevates income levels and improves the income structure for residents. In detail, for each unit increment in DIF, the annual per capita household income rises by 4,200 RMB, with wage income, business income, and property income increasing by 2,430 RMB, 1,030 RMB, and 450 RMB, respectively. DIF boosts residents' income by enhancing household employment rates, stimulating entrepreneurial endeavors, and expanding participation in financial markets. The income-raising impact of DIF is particularly pronounced for high-income individuals and rural inhabitants [20].

4.2.1. Shortcomings and Deficiencies

Existing studies in the relevant literature are relatively well-developed, and there is still room for expansion in the choice of variables. For example, more socio-economic factors and the impact of changes in family structure on social and personal well-being could be considered.

4.2.2. Summary and Reflection

Overall, all of the above literature suggests that DIF significantly improves the happiness level of Chinese society and families. Through innovative research perspectives and improved research methods, they provide new perspectives and empirical support for the study of the relationship between DIF and family well-being, which is an important reference value for policy formulation and implementation. It provides valuable theoretical and practical guidance to further promote the promotion and optimisation of DIF services.

5. Conclusion

This paper provides a systematic review of the well-being effects of DIF in the context of shared prosperity and analyses in-depth the role of DIF in reducing poverty, narrowing regional income gaps, reducing household financial risk, enhancing household financial resilience, and improving individual well-being at both the macro and micro levels. The results of the study show that DIF has played a positive role in promoting shared prosperity, especially in improving the financial stability and economic resilience of low-income groups, and is an important driving force in achieving the goal of "shared prosperity". However, the variations in effects across regions and groups suggest that DIF strategies need to be further optimised to address these challenges. The research in this paper provides a valuable theoretical basis and practical guidance for policymakers and financial

institutions helps to promote DIF to better serve the goal of commonwealth, and helps to improve the national digital economy policy and show its effectiveness.

To better fulfill the role of DIF in common prosperity, digital financial infrastructure should be strengthened, data and technological capabilities should be upgraded, the rule of law and regulatory system should be improved, and the development of DIF should be promoted according to local conditions. At the same time, financial education and literacy, and optimisation of digital FS should be strengthened to enhance household financial soundness and overall social welfare. Through these efforts, the broader inclusive value of DIF can be realised, contributing to the common wealth and social well-being.

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