

The Development Status and Countermeasures of Digital Inclusive Finance in China

Wenjing Tang, Jingyun Wo and Zichao Zhang

Anhui University of Finance and Economics, Bengbu, 233030, China

Abstract

With the continuous development of digital technologies such as 5G, blockchain, and cloud computing, digital finance and traditional inclusive finance are further integrated to form a new model of digital inclusive finance. This new model solves the old problems of traditional inclusive finance. It also brings some new challenges. The development of digitally empowered inclusive finance can promote supply-side structural reform, promote the faster development of traditional inclusive finance, and accelerate the digital transformation of banks. At present, China's digital financial inclusion development is facing challenges. Although it has achieved leapfrog development in recent years, there are obvious differences in development between regions, and it also faces challenges such as infrastructure provision and adaptive supervision. It is suggested to deal with it from three aspects: strengthening policy support, accelerating the construction of digital inclusive financial infrastructure, and improving digital inclusive financial supervision.

Keywords

Digital Financial Inclusion; Digital Economy; Finance; Financial Inclusion.

1. Introduction

1.1. Digital Financial Inclusion Becomes the Driving Force for Supply-Side Reform

HP Finance refers to financial institutions that provide appropriate and effective financial services for all social strata and groups at affordable costs[1]. It acts as a medium between fund providers and fund demanders in my country's financial system, and has become a coordinator of supply and demand[2]. An important pillar to take into account the balance of supply and demand. In order to solve the structural contradiction of oversupply of low-end and insufficient supply of high-end in recent years, seeking change is the primary problem that HP Finance needs to solve urgently. The rapid development of the digital economy in recent years has provided new impetus for the continuous innovation of the real economy[3]. In solving the structural contradictions on the supply side, HP Finance continues to integrate with digital finance, and with the help of digital platforms, it continuously integrates inclusive financial resources into it, laying the foundation for the healthy development of digital finance. At present, the main task of my country's economic operation and development is the popularization and application of high-quality development of information technology, and the promotion of blockchain, cloud computing, artificial intelligence and other innovative technologies and the integration of the real economy[4]. Therefore, the inclusive finance industry should be guided by the adjustment of the national industrial structure, meet the needs of the national digital economy, and use the market to speed up the pace of integrating digital finance[5].

1.2. The Scale of Digital Inclusive Finance Consumption has Expanded to Promote the Development of Inclusive Finance

At present, digital finance applies blockchain technology, cloud computing technology, artificial intelligence technology, etc. to third-party payment, which saves the time cost of going to the bank and makes online transactions possible[6]. Although most of the digital financial transactions through the Internet are small-value transactions, the number of digital financial transactions through the Internet has exceeded that of traditional financial industry transactions. These successful realizations benefit from the organizational framework of digital finance, which has formed an intersecting network structure[7]. Through "decentralization" in this network structure, the intermediary role of traditional commercial banks and non-bank financial institutions is weakened, allowing Different participants can directly trade through this network architecture, forming a model similar to PtoP and CtoC , which greatly facilitates financial individuals and small and micro financial enterprises, not only improves efficiency, but also reduces transaction costs [8].

1.3. The Development of Digital Inclusive Finance Promotes the Digital Transformation of Banks

Banks are not only the main body of traditional inclusive finance, but also the starting point for the reform of digital HP finance. The transformation of traditional banking products, sales, bank outlets, risk control, and back-office processes by digital technology helps traditional banks to create an effective digital HP finance[9].

(1) Provide high-quality financial services for individuals, enterprises and governments

Digitally empowered financial inclusion has increased the availability and high-quality demands of individuals, enterprises and governments for financial services. First, the inclusive development of digital finance reduces the time and cost of individuals, enterprises and other financial service demanders who need to go to the bank to handle financial services on the spot, greatly improving the convenience of financial services. At the same time, it includes various financial service methods such as online wealth management, third-party payment, and online lending, which reduces the opportunity cost of time use[10]. Second, the development of digital financial inclusion helps financial institutions to quickly and efficiently obtain information such as the direction of customer capital flow and investment direction through back-end analysis of big data. At the same time, digitalization makes it possible to handle banking financial services online, reducing labor costs and improving bank competition. force. Third, digital empowers traditional financial inclusion, promotes the realization of the goal of traditional financial inclusion, and conforms to the policy orientation of government departments. Therefore, government departments should increase funds and policies to support digital finance, promote the comprehensive development of the Internet, and promote the rapid development of traditional inclusive finance[11].

(2) Reduce transaction and service costs

The rapid development of financial inclusion has brought a large number of customer groups to banks, and at the same time, it has also brought greater operational pressure to banks . In the promotion of traditional inclusive finance, by setting up micro-financial institutions in communities and convenience points, as subordinate branches, the transaction and service costs are borne by the higher-level branches, although to a certain extent, users are increased. However, it cannot completely guarantee the balance of payments, resulting in a waste of funds and manpower[12]. However, with the development of digital inclusive finance, banks have effectively innovated digital HP financial services by introducing artificial intelligence, blockchain, cloud technology and other technologies to provide users with high-quality services, while reducing transaction and service costs and promoting rapid financial inclusion. , benign development[13].

2. Development Trends of Digital Financial Inclusion

2.1. China's Digital Financial Inclusion Achieves Leapfrog Development

Table 1. 2011-2020 Provincial Digital Financial Inclusion Index

province	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Beijing	79.41	150.65	215.62	235.36	276.38	286.37	329.94	368.54	399.00	417.88
Tianjin	60.58	122.96	175.26	200.16	237.53	245.84	284.03	316.88	344.11	361.46
Hebei	32.42	89.32	144.98	160.76	199.53	214.36	258.17	282.77	305.06	322.70
Shanxi	33.41	92.98	144.22	167.66	206.30	224.81	259.95	283.65	308.73	325.73
Inner Mongolia	28.89	91.68	146.59	172.56	214.55	229.93	258.50	271.57	293.89	309.39
Liaoning	43.29	103.53	160.07	187.61	226.40	231.41	267.18	290.95	311.01	326.29
Jilin	24.51	87.23	138.36	165.62	208.20	217.07	254.76	276.08	292.77	308.26
Heilongjiang	33.58	87.91	141.40	167.80	209.93	221.89	256.78	274.73	292.87	306.08
Shanghai	80.19	150.77	222.14	239.53	278.11	282.22	336.65	377.73	410.28	431.93
Jiangsu	62.08	122.03	180.98	204.16	244.01	253.75	297.69	334.02	361.93	381.61
Zhejiang	77.39	146.35	205.77	224.45	264.85	268.10	318.05	357.45	387.49	406.88
Anhui	33.07	96.63	150.83	180.59	211.28	228.78	271.60	303.83	330.29	350.16
Fujian	61.76	123.21	183.10	202.59	245.21	252.67	299.28	334.44	360.51	380.13
Jiangxi	29.74	91.93	146.13	175.69	208.35	223.76	267.17	296.23	319.13	340.61
Shandong	38.55	100.35	159.30	181.88	220.66	232.57	272.06	301.13	327.36	347.81
Henan	28.40	83.68	142.08	166.65	205.34	223.12	266.92	295.76	322.12	340.81
Hubei	39.82	101.42	164.76	190.14	226.75	239.86	285.28	319.48	344.40	358.64
Hunan	32.68	93.71	147.71	167.27	206.38	217.69	261.12	286.81	310.85	332.03
Guangdong	69.48	127.06	184.78	201.53	240.95	248.00	296.17	331.92	360.61	379.53
Guangxi	33.89	89.35	141.46	166.12	207.23	223.32	261.94	289.25	309.91	325.17
Hainan	45.56	102.94	158.26	179.62	230.33	231.56	275.64	309.72	328.75	344.05
chongqing	41.89	100.02	159.86	184.71	221.84	233.89	276.31	301.53	325.47	344.76
Sichuan	40.16	100.13	153.04	173.82	215.48	225.41	267.80	294.30	317.11	334.82
Guizhou	18.47	75.87	121.22	154.62	193.29	209.45	251.46	276.91	293.51	307.94
Yunnan	24.91	84.43	137.90	164.05	203.76	217.34	256.27	285.79	303.46	318.48
Tibet	16.22	68.53	115.10	143.91	186.38	204.73	245.57	274.33	293.79	310.53
Shaanxi	40.96	98.24	148.37	178.73	216.12	229.37	266.85	295.95	322.89	342.04
Gansu	18.84	76.29	128.39	159.76	199.78	204.11	243.78	266.82	289.14	305.50
Qinghai	18.33	61.47	118.01	145.93	195.15	200.38	240.20	263.12	282.65	298.23
Ningxia	31.31	87.13	136.74	165.26	214.70	212.36	255.59	272.92	292.31	310.02
Xinjiang	20.34	82.45	143.40	163.67	205.49	208.72	248.69	271.84	294.34	308.35

As shown in Table 1, the digital financial inclusion business in China's provinces and cities achieved leapfrog development from 2011 to 2020. In 2011, the digital financial inclusion index of each province was double-digit, and by 2013, it had all exceeded three-digit. , the digital financial inclusion index of each province in 2020 is about 10 times that of 2011. The median value of the provincial digital financial inclusion index in 2020 is 10 times that of 2011, and the average annual growth of the index value is 29.1%[14]. From the above, we can see the rapid development trend of digital financial inclusion in China . In terms of growth rate, the growth rate of the digital financial inclusion index has slowed down in recent years, which to a certain extent indicates that as the development of the digital financial market becomes more and more mature, the industry has begun to transition from a high-speed growth stage to a normal growth. In 2020, all aspects of China's economy and society were severely impacted by the new

crown epidemic. The annual economic growth rate dropped significantly compared with previous years, but the digital financial inclusion index still increased by 5.6% compared with 2019, showing the uniqueness of digital finance in the epidemic era. Strengths and strong resilience [15].

2.2. Significant Regional Differences in the Development of Digital Financial Inclusion

In recent years, although digital financial inclusion in various provinces in China has achieved leapfrog development, there are obvious differences in development between regions. The distribution of the digital financial inclusion index in 2020 presents three development echelons. The three provinces in the first echelon are Shanghai, Beijing, and Zhejiang. This is related to the local government's support for the development of digital financial inclusion. For example, in October 2021, The Shanghai Municipal Government has released the "14th Five-Year Plan for the Comprehensive Promotion of Urban Digital Transformation in Shanghai", which will implement the Big Data Inclusive Finance Application 2.0 special project, and provide more than 200 billion yuan in inclusive finance loans; There are nine provinces including Tibet, Ningxia, Inner Mongolia, Xinjiang, Jilin, Guizhou, Heilongjiang, Gansu, and Qinghai. These provinces with low digital financial inclusion index are all provinces in the western region or northeastern region, and the development of digital inclusive finance ranks first. The echelon development gap is large; other eastern and central provinces are in between the above two echelons.

3. Challenges Facing Digital Financial Inclusion

3.1. Differences in the Digital Divide between Regions

Affected by the urban-rural and regional disparities and the accelerated aging of the population, the problem of my country's digital divide has become increasingly prominent. On the one hand, there are obvious differences in the structure of urban and rural netizens. According to the 48th "Statistical Report on Internet Development in China", as of June 2021, the scale of urban netizens in China is 714 million, and the scale of rural netizens is 297 million, accounting for 28% of netizens respectively. Compared with the statistics of December 2020, the number of urban netizens increased by 0.9%, and the number of rural netizens decreased by 0.9%. On the other hand, although the difference in Internet penetration between urban and rural areas has decreased in recent years, there is still a large gap. According to the 48th "Statistical Report on Internet Development in China", the urban Internet penetration rate from 2018 to 2021 From 72.7% to 78.3%, the Internet penetration rate in rural areas has increased from 36.5% in 2018 to 59.2% in 2021. The difference in digital penetration between urban and rural areas is shrinking, but by 2021, the Internet penetration rate in urban and rural areas will still be 19.1% difference. Finally, there are differences in the ability of different geographical groups to benefit from financial services. Affected by factors such as age structure and education level, relatively disadvantaged groups are more dependent on physical outlets to obtain financial services. According to the 48th "Statistical Report on Internet Development in China", in 2021, the age composition of netizens in the age group of 30-39 will account for the largest proportion of 20.3%, while the proportion of netizens aged 60 and above will only account for 12.2%. Among them, the younger group generally has a high degree of acceptance of digitalization, but the older group has a slower acceptance of digitalization and a high degree of dependence on offline physical outlets to obtain financial services. Once digital outlets completely replace physical outlets, it may lead to relatively vulnerable groups. Financial exclusion from digital pervasiveness.

3.2. Challenges of Infrastructure Supply

The healthy and orderly development of digital inclusive finance is inseparable from the construction of corresponding settlement and payment, information and communication supporting infrastructure. However, such products are quasi-public goods, and the non-exclusive derived properties determine that these infrastructures cannot be well provided by the market, so they can only be provided by government compulsory financing, but as public goods or quasi-public goods, their time cost, The labor cost and capital cost are high. On the one hand, the longer time cost leads to obvious differences in the popularity of different regions. On the other hand, government financing funds come from local taxation, and the ultimate burden of larger capital investment still falls on taxpayers, bringing a greater burden to taxpayers.

3.3. Regulatory Adaptability Challenges

In terms of the regulatory system, the types of digital financial inclusion financial products are complex and the operating modes are diversified. It is necessary to improve comprehensive supervision and penetrating supervision, and strengthen supervision cooperation and information sharing. First, while government policies support vigorously promoting the development of digital inclusive finance, regulators have insufficient awareness of some emerging financial products and operating models of financial institutions, resulting in a series of credit risks, market risks, operational risks, and reputational risks. risk, etc. At the same time, regulators cannot give reasonable and effective countermeasures after discovering problems, which severely limits the faster and better development of digital financial inclusion. Second, digital financial inclusion relies on a powerful database for technical analysis to reduce the market failure problem of asymmetric information between financial institutions and enterprises, and between financial institutions and personal information. However, personal information involves personal privacy. After financial institutions obtain all personal information, they will Privacy protection measures and remediation after information leakage are urgent issues to be solved. The corresponding regulatory authorities should supervise in real time whether financial institutions have illegally abused personal information, and strengthen the construction of a digital system.

4. Policy Recommendations

4.1. Expand Fiscal Support for the Development of Digital Inclusive Finance

Government fiscal policy plays an important role in promoting the development of digital financial inclusion. However, appropriate fiscal policies should be formulated for different regions with different development, because excessive or insufficient fiscal policy support will have a negative impact on the role of fiscal and digital financial inclusion in promoting regional economies. development in varying degrees. First, it is necessary to continue to maintain the leading role of fiscal policy in promoting the development of digital finance in different regions, and to realize the reallocation of financial funds in developed and impoverished regions through the drainage of fiscal funds. At the same time, the government will further expand the depth and breadth of financial support for digital inclusive finance through diversified financial support methods, and realize the digital transformation from traditional inclusive finance to digital inclusive finance in more regions. Second, the government should formulate diversified financial support policies for regions with different levels of development in different periods. For poverty-stricken areas, the financial compensation mechanism for digital financial inclusion can be increased in the short term, such as the establishment of a short-term digital inclusive financial compensation mechanism to help poverty-stricken areas transition smoothly in the short term. For regions with a relatively high degree of development, the government can appropriately reduce financial subsidies for local digital inclusive finance to

prevent local policy dependence and hinder the formation of its own advantages to participate in fair competition between regions.

4.2. Accelerate Support for the Construction of Digital Inclusive Financial Infrastructure

The development of digital inclusive finance can not only promote the rapid development of the local economy, but also accelerate the reduction of the development imbalance between regions. Therefore, it is necessary to vigorously promote the construction of digital inclusive finance, especially to accelerate the construction of digital inclusive finance infrastructure. In areas where the development of digital inclusive finance is lagging behind, it is necessary to actively build a local digital inclusive financial ecosystem, relying on 5G, blockchain, big data platforms, and cloud computing to realize the integration of data elements and capital circulation processes, and realize data in the government, enterprises, and individuals. efficient flow between. Accelerate the construction of four pillars of digital financial infrastructure. First, digital ID cards and electronic customer authentication systems. The electronic or digital upgrade of identity authentication is the core of the entire financial reform. However, the construction of many impoverished areas is still backward, and many local populations do not have formal electronic identity documents. Second, an open electronic payment system. At present, the mobile payment system is mainly supported by non-bank telecom operators and other technology platforms. Although the scale of mobile payment is not small, it is still limited by mobile devices. In the future, digital identity authentication should be combined with open electronic payments to provide more infrastructure for making mobile payments.

4.3. Improve the Construction of the Supervision System for Digital Inclusive Finance

As a new form of digitalization to promote the development of traditional inclusive finance, digital inclusive finance is inseparable from the construction of policy supervision while it is flourishing. Different regulatory measures are formulated according to different potential risks. First, a "supervision sandbox" system must be established, and the principles of fairness, impartiality and openness must be realized for the objects included in the supervision sandbox management. Timely clearing and withdrawal, timely summary and sorting of problems found during supervision, and continuous improvement of supervision ideas. Second, industry self-regulatory associations can be used to supplement the supervision of the inclusive financial system. Industry associations have always played a useful role as a bridge of communication between financial supervision and the industry. Industry associations are nominally formed spontaneously for their members, and play the function of self-discipline supervision and management. They are more flexible than regulatory agencies in terms of funding sources and personnel allocation.

References

- [1] Aisaiti, G., Liu, L.H., Xie, J.P., Yang, J., 2019. An empirical analysis of rural farmers' financing intention of inclusive finance in China The moderating role of digital finance and social enterprise embeddedness. *Industrial Management & Data Systems* 119, 1535-1563.
- [2] Han, H.Y., Gu, X.M., 2021. Linkage Between Inclusive Digital Finance and High-Tech Enterprise Innovation Performance: Role of Debt and Equity Financing. *Frontiers in Psychology* 12.
- [3] Li, G.Q., Fang, X.B., Liu, M.T., 2021. Will Digital Inclusive Finance Make Economic Development Greener? Evidence From China. *Frontiers in Environmental Science* 9.
- [4] Li, J., Wu, Y., Xiao, J.J., 2020. The impact of digital finance on household consumption: Evidence from China. *Economic Modelling* 86, 317-326.

- [5] Li, J.R., Li, B.W., Digital inclusive finance and urban innovation: Evidence from China. *Review of Development Economics*.
- [6] Liu, Y., Liu, C.Y., Zhou, M., 2021a. Does digital inclusive finance promote agricultural production for rural households in China? Research based on the Chinese family database (CFD). *China Agricultural Economic Review* 13, 475-494.
- [7] Liu, Z.Q., Zhang, Y.H., Li, H.Y., 2021b. Digital Inclusive Finance, Multidimensional Education, and Farmers' Entrepreneurial Behavior. *Mathematical Problems in Engineering* 2021.
- [8] Pan, Y., Ma, L., Wang, Y.Z., How and what kind of cities benefit from the development of digital inclusive finance? Evidence from the upgrading of export in Chinese cities. *Economic Research-Ekonomska Istrazivanja*.
- [9] Wang, W.J., He, T.Y., Li, Z.H., Digital inclusive finance, economic growth and innovative development. *Kybernetes*.
- [10] Wang, Z.R., Zhang, D.H., Wang, J.C., 2022. How does digital finance impact the leverage of Chinese households? *Applied Economics Letters* 29, 555-558.
- [11] Xie, M.F., 2017. Research on Rights Protection of Digital Inclusive Finance Consumer, 7th International Conference on Education, Management, Information and Computer Science (ICEMC), Shenyang, PEOPLES R CHINA, pp. 203-208.
- [12] Xie, W.W., Wang, T., Zhao, X., 2020. Does Digital Inclusive Finance Promote Coastal Rural Entrepreneurship? *Journal of Coastal Research*, 240-245.
- [13] Yu, C.J., Jia, N., Li, W.Q., Wu, R., 2022. Digital inclusive finance and rural consumption structure - evidence from Peking University digital inclusive financial index and China household finance survey. *China Agricultural Economic Review* 14, 165-183.
- [14] Yu, N.A., Wang, Y.Z., 2021. Can Digital Inclusive Finance Narrow the Chinese Urban-Rural Income Gap? The Perspective of the Regional Urban-Rural Income Structure. *Sustainability* 13.
- [15] Zhao, H.B., Zheng, X., Yang, L., 2022. Does Digital Inclusive Finance Narrow the Urban-Rural Income Gap through Primary Distribution and Redistribution? *Sustainability* 14.