The Impact of Development of Financial Technology on China's Economy

Ziyu Chen *

Business School, Nanjing University of Science and Technology ZiJin College, Nanjing, Jiangsu, China

* Corresponding Author Email: 1516460001@stu.suda.edu.cn

Abstract. The development of financial technology (FinTech) has an important role in the present economy. It not only drove overall economic consumption through innovative service models and financial tools, but also helped people return to a normal rhythm of life to a certain extent during the COVID-19 epidemic by helping offline operations shift to online services, online offices, online teaching, and other innovative approaches. In addition, it plays a very important role in social governance and promotes social stability. This paper focuses on analyzing the impact of FinTech on industrial structure, upgrading in consumption structure and social governance, and argues that society, government and the market need not only to develop and apply FinTech correctly, but also to implement development policies according to local conditions. In this way, it can better play its positive role in promoting economic development, and at the same time, it is also necessary to strengthen supervision and regulation to prevent the growth of undesirable behavior.

Keywords: Financial technology; industrial structure; consumption structure.

1. Introduction

Financial technology (FinTech) is the combination of finance and technology, which refers to the innovation of products and services provided by the traditional financial industry through the use of various scientific and technological means, in order to improve efficiency and effectively reduce operating costs. With the development of science and technology, the application scenarios of FinTech have covered six major financial fields such as payment and clearing, lending and financing, wealth management, retail banking, insurance, and transaction settlement. Nowadays, FinTech is one of the hottest topics in the current economy and society, which makes financial services more convenient and efficient through technological innovation and model innovation, brings many new business models and economic growth trends, and profoundly changes the development pattern of the financial industry and the related real economy, as well as has far-reaching impacts on the entire economic and social industry structure, consumption upgrading and employment structure.

As to why FinTech has had a significant impact on the development of the modern economy and society, there are several reasons. First of all, the development of financial science and technology promotes the upgrading and optimization of industrial structure. Traditional industries can realize business transformation, business model transformation and upgrading through the use of FinTech products or technologies, and small and medium-sized enterprises can realize financing convenience through the support of FinTech, which provides more possibilities for vigorous development and upgrading of enterprises. Secondly, the development of FinTech also promotes the upgrading of the consumer structure. The development of FinTech makes it easier and faster for consumers in remote areas to make mobile payments and enjoy diversified financial services, and, thus promoting the upgrading of the consumption structure of the whole society. Finally, the development of financial technology has also had a certain impact on social governance. With the development of financial technology, the processing speed of traditional financial tools in social governance has been much slower than that of financial innovation tools, and technological tools under financial technology have already improved governance efficiency to a large extent, for example, by increasing the detection rate of crimes and identifying loopholes that are difficult to detect in activities such as regulatory vacuums and money-laundering.

In view of the above reasons, this paper explores the impact of FinTech from three aspects, namely Industrial upgrading, consumption upgrading and positive effects on the social governance level. At the same time, this paper also puts forward some suggestions on the corresponding impacts, with a view to providing some useful references for the healthy development of FinTech and the sustainable economic and social progress in the future.

2. Development of FinTech in China

2.1. Current Situation

At present, the application of financial technology in China has been very extensive, relying on basic technologies such as big data, cloud computing, artificial intelligence and blockchain, financial technology has profoundly changed or reorganized the transaction rules and business management mode of the existing economic market.

In the economic sphere, through financial infrastructure such as payment and settlement systems and regulatory systems, the supply of financial services is used to catalyze new business models, technological innovation and applications, and innovative services and products, thereby promoting the formation of new financial business models, such as intelligent financing, insurance technology, wealth management, mobile payment and so on, will realize the transformation of the direction of financial services from offline to online, and the expansion of the nature of services from high-end to inclusive, so as to provide diversified and diversified financial services for a larger number of public groups [1]. However, there are also threshold effects, nonlinear marginal incremental effects, regional heterogeneity effects, as well as the potential risk extension of FinTech and the mismatch of regulatory efforts and policy speed with existing FinTech development [2].

2.2. Positive Impact

Firstly, from the perspective of the operational level of the real economy or related industries, through the introduction of emerging technologies such as big data, cloud computing, artificial intelligence, blockchain and other emerging technologies, a digital operation mode with FinTech at its core has been formed, which improves customer acquisition, stimulates consumption, and reduces promotional and manpower cost [2]. For example, Ant Financial Services, a micro and small financial services group prepared mainly by Alipay, has widely applied big data and cloud computing technology to lending relationships, accurately understood the borrowing habits of customers, and then, through the main methods of high interest rates, Asset Backed Securities(ABS), high leverage and turnover, and syndicated lending, and with the earliest capitalization of more than 3 billion yuan, successfully originating more than $360 billion in online loans in just four years [3]. Another case is that, as the strongest comprehensive financial services insurer in China, Ping An Insurance (Group) Company of China, Ltd. (“Ping An”), in the face of macro technological development factors and increasingly stringent regulation, as well as having endured huge losses under the changing environment, has sought a way out from its traditional insurance business through the use of FinTech, and after 2015, the group has transformed its business with five core technologies based on artificial intelligence, cloud computing, blockchain, big data and security [4]. After 2015, the group has established the development of “finance + technology” based on five core technologies. artificial intelligence, cloud computing, blockchain, big data and security, established a development strategy of “finance + technology”, focusing on two major development areas, namely financial technology and medical technology, and promoting the transformation of FinTech results in the field through internal reduction of labor costs and external continuous innovation of services and technology in order to realize the value, which not only responds to the changes in the environment, but also improves the competitiveness of the industry [4]. The remarkable success is then reflected in the 2017 annual report data, where Ping An of China’s internet users and APP users grew by 26% and 58% respectively compared to 2016 [4].

Secondly, from the perspective of stimulating the role of enterprises, it enhances the innovation vitality of the main body of small and medium-sized enterprises (SMEs). SMEs are an important part of China's socio-economic development today. Since 2007, SMEs have accounted for 99.7% of all businesses operating in China, and today, according to data, SMEs in China account for at least 60% of China's GDP, and create more than 82% of China's jobs. Opportunities in China [5]. However, before the development of FinTech, the process of obtaining capital for SMEs at the start-up stage was very difficult. In the past, in the traditional financial sector, SMEs have encountered a great deal of resistance in the early stages of their business for two main reasons. The first was their inability to qualify for mortgages, and the second was the high return on capital demanded by the market. Later, with the introduction of financial technology, many fast and convenient financial tools were applied to the integration of traditional financial business with big data and the Internet, for example, the construction of mobile terminal systems and digital banking, which effectively reduces the cost of transactions, and constantly improves the level of supply and demand for funds, the supply efficiency and the matching degree, which to a large extent alleviates the problem of mismatch of information or conditions on the two sides of the supply and demand for funds [6]. In addition, the financial intermediaries spawned under the development of financial technology also provide a more diversified platform for the development and financing of small and medium-sized enterprises (SMEs), reduce the financing costs of SMEs, and make the loan process of small and micro-enterprises more convenient and intelligent, which solves the huge problems of SMEs at the early stage of development, and enhances the development vitality of SMEs to a certain degree, promotes entrepreneurship and employment, and stimulates and promotes the further development of the real economy. Further development of the real economy [5].

Thirdly, compared with traditional financial methods, financial technology is less restricted by objective conditions, to a large extent it can withstand the impact of force majeure factors in the environment. For example, during the COVID-19 Epidemic, because of the existence of FinTech, to a large extent it helped people to maintain the rhythm of life, such as the real economy to carry out online services, to alleviate the economic impacts brought by the offline operation. For example, Liu, Pan and Yin analyzed the impacts brought to the household consumption during the period of COVID-19 by using the least square method, and found that FinTech, like mobile payment, had a certain promotion effect on the consumption of urban households during the Epidemic. Consumption during the epidemic had a boost for urban households, offsetting some of the effects of the restrictions on spending power during the epidemic [6]. In addition, office workers were able to work online without fear of travel restrictions caused by the epidemic, and students were able to ensure their normal learning progress through online teaching by their teachers. Beside the positive impacts mentioned above, the innovation of FinTech can also promote the increase of financial transactions through a series of mechanisms such as reducing transaction costs, increasing the symmetry and transparency of information between the two parties, and relaxing the restrictions on lending, which can lead to the development of entrepreneurship and employment, increase the disposable income of the residents, and ultimately stimulate the consumption level of the overall household. For example, the digital economy has a certain impact on the entrepreneurial behavior of residents, and that it can promote entrepreneurship among residents, thereby increasing their income and ultimately further increasing their consumption level [7].

Finally, at the level of social governance, FinTech provides great help for anti-money laundering operations. The purpose of money laundering is to rationalize the source of illegal proceeds so as to cover up the traces of illegal activities such as prostitution, gambling, drug trafficking, etc. Once the illegal proceeds have been successfully legalized, the offenders can use the illegal proceeds for reasonable consumption and investment [8]. Government departments and regulators around the world cannot afford to ignore the offense of money laundering, which is estimated by the International Monetary Fund (IMF) to account for between 2% and 5% of the world’s gross domestic product each year [8]. Anti-money laundering (AML) activities are not easy to carry out with traditional financial tools, however, when the innovative technology of data visualization emerged, it greatly improved

the efficiency of AML. In order to validate the usefulness of data visualization in assisting the detection of transactions that may be related to money laundering activities, Singh and Best use data visualization to propose the application of link analysis methods to visualize banking transactions affecting entities, and validate its effectiveness in the final part of the experiment through the independent review of relevant institutions and professionals, they found that the link analysis graphs are useful in aggregating data for the detecting specific patterns of transaction behavior is effective and is expected to improve the effectiveness of detecting money laundering [8]. In summary, innovative tools under FinTech are expected to provide great help in the governance of socio-legal issues, as they are largely technologically ahead of traditional FinTech.

2.3. Negative Impact

First of all, the development of financial technology has led to the continuous extension of the service chain of various industries, resulting in the risk of outward spillover, adding new risk transmission channels [2]. For example, in the emergence of a large number of new technology service companies, many companies choose to outsource their business to service companies to improve service quality or to save labor costs, and the extension of this chain will lead to the third-party service companies can obtain relevant user data from the company, and ultimately it is likely that the third party sells the user data, which is fatal to both the enterprise and the user [9]. This situation will be a fatal threat to both enterprises and users.

Secondly, FinTech enterprises continue to establish and consolidate industry barriers, forming unequal competition with traditional and data and technology-undeveloped financial institutions, resulting in FinTech will become a tool for oligopoly, making it difficult for many traditional financial institutions to survive in society [2]. For example, under the current development of FinTech, many efficient and convenient payment services have been derived, from the initial transaction payment market dominant players of Visa and MasterCard to today's massive rise of non-banking institutions and the massive popularity of cryptocurrencies under blockchain technology, which have not only improved the convenience of the payment function and lowered the cost of transactions, but also increased the transparency of the payment process, emphasizing the importance of trust in terms of morality and privacy and security issues. This situation makes general banking intermediaries lose their reasons for existence [10].

Thirdly, traditional regulation cannot keep up with the pace of FinTech innovation. The government's lack of laws and relevant policies in this area will lead to problems such as data leakage, hacking, and regulatory vacuum, further disrupting the order of the financial market [2]. For example, in the case of the Ant Financial Services Group mentioned above, although its lending interest rate does not reach the standard of usury stipulated by the People's Bank of China, the lending interest rate of the Ant Financial Services is already close to the red line and reaches the level of 14.44% APR, which is only less than 1% below the judicially protected upper line [3]. Secondly, before 2017, the absence of financial regulators allowed Ant Financial to take advantage of the loophole of unrestricted issuance of asset-backed securities (ABS) to conduct multiple ABS issuances, which led to a rapid rise in the volume of Ant Financial's loans. However, the hidden dangers of the rapid rise of this business are huge, as Ant Financial's business in the form of online lending involves a wide range of areas and a rapid expansion of the scale, which will cause a rise in aggregation, which will ultimately lead to a high social aggregation of loans concentrated on Anthem [3]. However, in the event of a major loss of Anthem's financial chain or cash flow, it could lead to a wide-ranging and huge socio-economic catastrophe. In addition, there is also the use of data and network platforms for network fraud has gradually increased in recent years, especially in the elderly group, which also shows the lack of certain access restrictions on the use of FinTech to get data, as well as insufficient supervision policy on the use of the relevant network technology process [9].

Fourthly, the development of FinTech is heterogeneous, with different regions and wealth levels responding to FinTech to different degrees [2]. Through the threshold effect test of central, eastern and western regions of China in other literatures, it is found that the driving effect of FinTech on the

real economy is significant in the regions like central and eastern regions with developed economy, perfect infrastructure, and sufficient policy encouragement, while for the regions like western regions with backward economy and insufficient human and financial resources of all kinds, FinTech cannot be developed vigorously, so it drives the real economic development is relatively difficult, and the effect is not significant [2].

Finally, with the extensive use of FinTech in social groups, the issue of consumer data privacy and security is also one of the hot topics [9]. While the access and collection of information from big data can help companies better target their audience by learning about users' preferences and habits, from the users' perspective, this data intrusion can be disturbing and can make them feel that their privacy is being violated. Moreover, if a large amount of user data is used in illegal channels, it will pose a great threat to both the government and society.

3. Suggestions

The insights of this paper are as follows. Firstly, in order to continuously strengthen and bring into play the positive effects that FinTech currently brings to industry, consumption and employment, the government and other relevant departments should formulate relevant supportive and incentive policies in order to promote the sustained, stable and effective development of high-end technology. At the same time, the construction of infrastructure such as FinTech-related enterprises and supporting industrial service chains also requires strong support from the government and others, which can be realized by providing financial support and relaxing loan financing conditions to stimulate and encourage social entrepreneurship and employment. Secondly, the relevant for the economic and technological development of backward areas to focus on, can give the relevant financial technology development policies to drive the development of the regional economy, in order to achieve the effect of increasing the disposable income of low-income families, improve the long-tailed people's accessibility to inclusive finance, and bring about economic growth. In addition, for technical issues such as data security in the development of financial technology, enterprises and society also need to strengthen security precautions, which can be improved by continuously improving security technology and strengthening the awareness of prevention.

Certainly, in the face of the rapid development of financial technology, the relevant regulatory measures also need to keep up with the pace of development, so as not to allow ulterior motives of enterprises or individuals to exploit the loopholes of inadequate regulation. For example, through the Interim Measures for the Administration of Online Small Loan Business (Draft for Public Comments) drafted by the China Banking and Insurance Regulatory Commission (CBIRC) and the Central Bank in 2020, there are three constraints on Anthem. Firstly, the balance of personal online loans shall not exceed 300,000 yuan and shall not exceed 1/3 of the average annual income of the person in the past three years, and the lower of the two shall be the maximum loan amount. Secondly, the balance of corporate online loans shall not exceed 1 million yuan, which directly seals the upper limit of the online loan amount. Thirdly, in the case of a single joint loan, the proportion of capital contributed by the microfinance company operating the network microfinance business shall not be less than 30% [3]. It shows that the implementation of relevant policies can, to a certain extent, constrain the behavior of the regulatory vacuum. The unsatisfactory response of the traditional financial industry also shows that the development of financial technology needs to be improved, to find the shortcomings, improve efficiency and functionality, and expand the universality of the use of the inevitable requirements of the future development of financial technology.

4. Conclusion

This paper analyzes the positive and negative impacts of FinTech on industrial structure, consumption upgrading and employment structure in general, in order to provide some useful references for the healthy development of FinTech in the future. In conclusion, FinTech needs to be

used and developed correctly to drive the market economy, industry economy and the progress of the whole social economy, at the same time, the pace of financial regulation needs to keep up with the speed of technological development, in order to ensure that because of the regulatory vacuum and other behavior caused by the data security problems maximize the reduction, in addition, for each region or each wealth class, the use of FinTech should be done to In addition, for the different regions or wealth classes, the use of financial technology should be adapted to the local conditions, and the development of a good development policy in order to better play a positive role in promoting financial technology.

This paper has the following limitations. Firstly, this paper is based on textual analysis, but it also needs to do data-based analysis. Secondly, the analysis of FinTech in this paper is relatively general, and does not completely list the detailed and complete positive and negative impacts, for example, the question of whether the use of FinTech is applicable to people of all ages and classes, and the impact of FinTech on the structure of employment are missing from this paper in terms of thinking and analyzing. In the future, with the further development of FinTech, it is hoped that the impact of FinTech on the structure of the economy can be explored in depth from more aspects.

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