

Study On the Influence Mechanism and Effect of Financial Resource Allocation on Regional Innovation Capacity in China

Feng Luyao *

ACAbride academy, Shanghai, China

* Corresponding Author Email: luyao8279@gmail.com

Abstract. Reviewing the development of China in the past 40 years, it has made remarkable achievements in economic growth rate, which can be called "world miracle". However, the extensive growth model cannot promote the sustainable development of China's economy. In the long run, it will inhibit the supporting role of financial resource allocation on the improvement of regional innovation capacity. This paper studies the theory of regional economics and new institutional economics, and examines the influence of financial resources on innovation from the perspective of financial inhibition, financial deepening and financial structure. This paper is of great significance for the return of finance to its roots, the strengthening of the support of finance for innovation-driven, the reasonable positioning of the functions of the government and the market, and the implementation of innovation-driven strategy.

Keywords: Financial resources; Regional innovation ability; Market mechanism; Government intervention; Institutional environment.

1. Introduction

Although China's economic growth has created many miracles, the long-term factor-driven growth model has brought many negative effects to the domestic economic and social development, such as high consumption, low efficiency, income gap, environmental pollution and so on, which indicates that the factor-driven economic growth model is not suitable for long-term economic development. The economic development process of developed countries shows that innovation is the inexhaustible driving force of economic growth, and the theoretical circle also recognizes it. Obviously, it is the general trend to upgrade the mode of economic growth from factor-driven to innovation-driven. Since the eighteenth big meeting, with the implementation of the strategy of innovation driven, financial return to the source of the real economy, strengthen the financial support for innovation driven, play to the role of the market in the allocation of financial resources, better play to the role of the government and a series of major strategic intensive, which shows that policy makers have been in the process of the transformation of economic growth in the strategic layout. In this way, the quality of economic growth will be significantly improved in the future, innovation as the fundamental driving force of economic growth will be truly implemented and implemented, and the market mechanism will play a decisive role in the allocation of resources. At the same time, the role of the government will be better played, and the efficiency of resource allocation will be further improved. However, the current our country is still a developing country, the overall marketization lag, especially in the financial sector of financial inhibition characteristics is still the norm, the government control of financial resources is particularly obvious, which obviously compressed the market mechanism in the allocation of resources, market mechanism and government intervention in the field of financial resources allocation will exist for a long time. For the developing China, the poor coordination of different resource allocation methods is bound to affect the implementation of innovation-driven strategy, and then affect the effective support of financial resource allocation for regional innovation ability. Obviously, the solution of these problems can ensure the implementation of innovation-driven strategies and make the growth model truly innovation-driven.

2. Literature Review

Stiglitz and Weiss (1981) believe that the effect of bank credit to support the innovation activities is not effective, because if the enterprise innovation activities fail, the bank credit loses; if the enterprise innovation activities are successful, the banking institution receives less risk than its risk. This conclusion is generally consistent with the research of other scholars, that is, the stock market can significantly increase the investment in innovation activities, especially in small enterprises, and the positive effect of the bank credit market on innovation activities (Hsu et al., 2014; Zuo Zhigang, 2012; Sun Wuqin and Wang Pei, 2013; Zhang Yilin, et al., 2016). Further research also believes that the stock market has a positive role in promoting innovation activities compared to the supporting effect of the bank credit market (Hsu et al., 2014). The possible cause of the insufficient incentive of bank credit for innovation activities is that if the enterprise innovation activity fails, the bank credit will suffer losses; if the enterprise innovation activities are effective, the bank income does not match the risk assumed. Some scholars believe that in the early stage, bank credit support should be the main one, and in the later stage, with the further development of the economy, equity financing should be the main one. For example, Boyd and Smith (1992) believes that when a country is in the early stage of economic development, the financial system dominated by banking institutions is more effective in the early stage of economic development, while in the later stage of economic development, the market-led financial system is more effective in stimulating economic growth. The above conclusion is recognized by empirical research in the theoretical field. For example, Tadesse (2002) examines the influence of different financial structures on economic performance based on the industry data of 36 countries. The research shows that the market-based financial system is significantly better than the bank-led financial system in terms of economic performance; the bank-led financial system is suitable for countries with lagging financial development, and the market-led financial system is suitable for financial developed countries, so as to better play the role of financial structure on economic performance. Recent research also focuses on the relationship between bank credit and stock market and economic growth in the different stages of development of the country. They agree that the role of stock market is more and more obvious from the early stage to the developed stage, while the effect of bank credit market is weaker and weaker (Demirguc-Kunt et al., 2013; Lin et al., 2013). There is a view that these two different channels promote each other and complement each other. For example, Merton (1992) investigated the relationship between financial intermediary and financial market, and the author called the competitive relationship between the two "spirals of financial innovation" (Financial Innovation Spiral), that is, the competition between financial intermediary and financial market is a process of mutual promotion and development. Further, some scholars believe that although the stock market and the credit market play different roles in the process of economic growth, they have mutual promoting effects (King and Levine, 1993; Levine and Zervos, 1998), that is, the overall coordinated development of the financial system is the core link that affects technological innovation activities (Merton, 1995; Beck et al., 2000; Xu Ming and Liu Jinshan, 2017). Some people also believe that the different environments of each country at different stages give rise to the different optimal financial support innovation structures. For example, according to the study of Rajan and Zingales (2003), the choice of financial system depends on the difference of environment. Specifically, when the enterprise scale is small and the legal system environment is poor, the bank credit market is more conducive to the enterprise activities; when the enterprise scale is large and the legal system environment development quality is high, the increasing role of the equity market will be highlighted. Research by other scholars also shows that equity financing requires the protection of the legal institutional environment (Rajan and Zingales, 2003, Kpodar and Singh, 2011; Yifu Lin, 2010; Gong Qiang et al., 2014; Wang Yongqin et al., 2016; Zhang Yilin, et al., 2016), while the bank credit market needs to rely on the active risk supervision of the bank itself (Rajan and Zingales, 2003; Zhang Yilin et al., 2016).

Lin Yifu et al. (2009) put forward a theory of optimal financial structure. They believed that the institutional arrangement in each financial system has its own advantages and disadvantages in the aspects of deposit absorption, capital allocation, risk diversification and information processing of

financial transactions. At the same time, the factor endowment of an economy at each stage of its development determines the optimal industrial structure of its actual economic sector, and thus will constitute a reasonable institutional arrangement of financial services at that stage. As a result, an economy has an optimal endogenous financial structure at each stage of its development (Song and Thakor, 2010; Kpodar and Singh, 2011).

3. Theoretical Foundations

3.1. Financial Resources Theory

The theoretical system of financial resources mainly includes the following aspects: the first is the principle of financial resources, which, as a component part of the financial theory, interprets the financial theory from a new perspective and provides a new theoretical framework for the relationship between finance and economic development. The second is the theory of financial resource coordination, which mainly studies the financial resources itself and the law of coordination with economic resources and social resources, and provides a theoretical basis for government departments and market subjects to improve the allocation level of financial resources. Specifically, it includes the coordination between internal elements in the financial field, which mainly involves the coordination between monetary resources, financial resources, other financial commodity resources and financial institutional resources; the logic follows that the economic resources are the basis of financial resources development, the development and allocation of financial resources can better mobilize economic resources; the coordination between financial resources and social resources, culture, religion, system, human resources and education; and the solution of the above coordination problems can promote the effective allocation of financial resources. The third is the theory of the development and allocation of financial resources, which mainly studies the development and allocation of financial resources of various market participants, so as to provide normative theoretical guidance for ensuring the reasonable development of financial resources and avoiding the excessive development of financial resources. To be specific, the central bank is the development subject of monetary resources, financial laws and regulations, monetary policy and macro-control, and other financial institutions have no right to participate in it. The central bank has a monopoly position in the development of financial resources here. Commercial banks are the development subjects of the specific implementation rules of financial commodities, financial capital, commercial banks and the financial informal rules including financial culture. Other kinds of financial subjects also have their own areas of financial resources development. Of course, the development of financial resources is subject to the constraints of formal systems, which is a process of dynamic adjustment, not unchanged. The development of financial resources follows the following principles: the subject of financial resources development has a clear division of labor, and is implemented in strict accordance with relevant laws and regulations and other institutional documents. The principle of social benefit is that the development of financial resources should take into account the overall and long-term interests of the country and avoid the short-sighted situation of the main development department. The principle of efficiency game, that is, the development subject is selected according to the social benefits of financial resource development. The unified principle of cost and benefit mainly involves the cost, risk, income and input and output problems in the process of development and allocation of financial resources. The effective allocation of financial resources includes the following basic principles: the coordination principle means that the coordination with natural resources, economic resources and social resources is the premise of the effective allocation of financial resources; the objectivity principle refers to the effective allocation of financial resources based on the current accumulated "stock", too much or too little allocation is invalid; the performance principle refers to the principle of sustainable development, that is, the development and allocation of financial resources, and provides the accumulation of quantity and function while meeting the current demand.

3.2. Theories related to regional innovation

As for the research of institutional innovation theory, Schumpeter's innovation theory not only includes the innovation of products, market and methods, but also covers the innovation of organizational system, continuing the research context of Schumpeter. Later scholars have conducted a lot of fruitful research in the field of institutional innovation. The most representative is the pioneering study of new institutional economics. The Economics of New Institutions (North, 1990) in the study of the relationship between institutional environment and transaction costs believes that under the condition of constant technical level, the arrangement of institutional environment can reduce transaction costs. North (1990) further concluded that the institutional environment includes formal rules and informal rules, which cover a variety of laws and regulations, political and economic rules, and informal rules include customs, culture, traditions and codes of conduct. The system is a "mixed" bag, which are not only factors conducive to the improvement of production capacity, but also factors inhibiting the improvement of production capacity. Therefore, a good institutional environment can have a positive incentive effect on production activities; otherwise, it is only conducive to redistribution activities, which is most obvious in developing countries. Because the system evolution can bring the effect of increasing marginal reward, it is the fundamental factor of lasting economic growth. Later stage, North has examined the evolution of the institutional environment in relation to economic growth. As North and Wallis (1994) studied the structural correlation of transaction costs, technological and institutional evolution, and economic growth, They believe that good institutional or technological evolution can reduce transaction costs, It then has an important impact on economic growth; North (2005) analyzed the economic growth problem from the perspective of interpersonal relationship, He further believes that institutional arrangements can only produce sustained economic growth if they mitigate the interference of human relations from the technological potential, This is most evident in the course of US economic growth. Based on the above theoretical research of institutional innovation, it is not difficult to find that both formal institutional environment and informal rules can have different effects on the innovation activities of market subjects, and then the impact of economic growth.

4. Mechanism analysis of financial resource allocation affecting regional innovation capacity

4.1. Mechanism of financial resource allocation affecting regional innovation capacity under market mechanism

In the actual economic activities, the financial resources of developed countries are basically allocated under the market mechanism; in the theoretical literature research, the influence of financial resource allocation on innovation is how the financial resource allocation affects innovation activities of financial resource allocation on innovation. As early as during the British Industrial Revolution, the role of financial resources in supporting industrial projects was fully reflected (Bagehot, 1873), and the British financial system supported the smooth implementation of the industrial Revolution. It can be seen that it is the support of financial resources that promotes the innovation of industry and lays the foundation for the smooth development of the industrial revolution. Bank credit configuration for the system of innovation theory research can be traced back to at least Schumpeter (1934), he thinks that bank credit support for entrepreneurs can stimulate entrepreneurial innovation spirit, such as building new enterprises, build new organizational structure, develop new markets, develop new product technology, etc., and realize the destruction of "creative" process. It is not difficult to introduce the above theory. A reasonable financial operation mechanism can ensure that financial resources flow to innovative enterprises, and then stimulate the vitality of innovative enterprises to promote the improvement of regional innovation ability. Next, this paper will analyze the general operation mechanism of financial resources affecting regional innovation ability. According to the

above-mentioned definition in this paper, this paper will only analyze the situation of commercial banks here.

Therefore, whether the financial resource allocation of commercial banks can play a positive role in promoting the innovation ability depends on whether it can provide a series of reasonable operation mechanisms for the latter. Specifically, this paper summarizes the operation mechanism as the following points: First, the supply of financial resources. The improvement of regional innovation capacity generally requires a large amount of research and development funds. In addition to the internal financing of regional innovation subjects, the credit allocation of banks is an indispensable source of external financing. Banks can not only explore innovative entrepreneurs (King and Levine, 1993) at a lower cost, but also absorb social funds and ensure the supply of funds (Levine, 1997) to support enterprise innovation, and then drive the improvement of regional innovation ability. Second, the disclosure of information. When the innovation sector carries out innovation activities, information asymmetry is the norm, and one of the advantages of banks is the production and disclosure of information. When allocating financial resources, banks usually require the innovation department to mortgage assets and hold the right to repay debts. On the one hand, the above approach restricts the moral hazard of the enterprise innovation department and reduces the information asymmetry (Greenwood and Jovanvic, 1990), and on the other hand, it also reduces the cost of external financing from enterprises (Benfratello et al., 2008), and finally will allocate the credit funds to the departments with the most innovative potential, so as to achieve the purpose of promoting the regional innovation capacity. Third, the diversification of innovation risks. Banks can provide different financial instruments (King and Levine, 1993) according to the risk differences of innovation. These financial instruments belong to different levels of financial resources. Only when the hierarchical structure of financial resources can they optimize the allocation of regional innovative financial resources by adapting to the risk characteristics of innovation resources. Fourth, innovation-motivated production. Since most enterprises may be passive and passive in carrying out innovation activities (Lemaitre, 1988), the efficient banking system provides a distribution tool of innovation income while making credit investment in innovation departments, thus stimulating and releasing the innovation vitality of enterprises and effectively promoting the improvement of regional innovation ability. In fact, the above mechanism can also be subdivided, but the most important point to promoting regional innovation ability is the supply of financial resources brought by the allocation of financial resources, and the support of credit funds is the key factor to promote the continuous improvement of regional innovation ability.

4.2. Mechanism of financial resource allocation affecting regional innovation capacity under government intervention

As an important part of the modern financial system, policy-based financial institutions, especially policy banks, also play an important role in regional innovation. Due to the phenomenon of "failure" in the market mechanism, this objectively leads to the "blind spot" in the field of credit allocation, resulting in some industries and fields being "abandoned". As Bai Qinxian and Wang Wei (2004) said, there are "blind spots" in the allocation of resources under the market mechanism, and there are industries with no time to care about, mainly in the following aspects: agriculture, basic industries and facilities, export industries and economically underdeveloped areas. The above blind spots are often the basic link of the innovation capacity of a country or region. If the development is lagging behind, the development of the innovation potential of the whole country or region may be affected. Due to the "failure" of market mechanism in the allocation of credit funds, the government needs to take the initiative to intervene and establish policy-based financial institutions (Bai Qinxian and Qu Zhaoguang, 2006). As an important part of policy-based financial institutions, policy banks take the implementation of the government's specific social and economic policies. Based on the principle of "doing something, not doing something", they guide the rational and efficient allocation of financial resources through the adverse selection function. In some areas of the market economy, commercial finance is unwilling or unable to finance according to the principles of the market. These fields are

of great significance to the overall economic interests of the country and the economic and social development. At this time, it is necessary to allocate financial resources through policy-based finance.

Due to the existence of information asymmetry, commercial Banks will for the high risk, cost and income volatility and "vulnerable" refused to put or delay the credit funds, so the relationship between these groups and commercial Banks for government intervention policy bank credit fund allocation provides a realistic theoretical basis. Policy-based finance is the performance of the government's planning mechanism in the field of financial resource allocation (Bai Qinand Guo Gang, 2000), which emphasizes the role of the state as the main body of capital allocation (Yang Di, 2011), which is one of the main ways for the government to participate in the capital allocation (Jia Kang and Meng Yan, 2009). The role mechanism of policy banks in the improvement of regional innovation capacity can be summarized in the following aspects: First, direct support (Bai Qinxian and Wang Wei, 2013; Zhang Yilin et al., 2016). Government through policy Banks to the foundation of the national economy industry and strategic industry to give huge, sustainable, strong direct credit support, which can not only add commercial Banks due to profit-driven may bring credit allocation distortion, also can provide a fundamental innovation research and development of a country or region. Second, provide risk guarantee (Zhang Yilin et al., 2016). By providing risk guarantee for the innovation sector, the government will subsidize the innovation sector when the event of the project fails, i. e. the risk guarantee can only play a role if the project fails. Third, siphon and expansion, advocacy and induction (Bai Qinxian and Wang Wei, 2013). Policy banks can indirectly attract credit funds from private or private financial institutions to engage in high-risk emerging industries or key industries that meet the policy intention or national long-term development strategic goals through direct capital investment or less capital investment. In theory, the most important support channel in the above aspects is direct support (Bai Qin and Wang Wei, 2013; Zhang Yilin, et al., 2016), and direct credit funding can increase the R & D investment of the innovation department, reduce the information cost, and provide more effective support for the R & D activities of the innovation department, so as to promote the improvement of regional innovation ability.

5. The effect of financial resource allocation on regional innovation capacity under market mechanism

The level of human capital (edu) is an important factor affecting innovation (McKelvie and Davidsson, 2009; Alegre et al., 2006; Cohen, 2010; Sun Wenjie and Shen Kunrong, 2009; Wu Yanbing, 2012; Qi Lan and Wang, 2013; Zhang Jie et al., 2016), the higher the human capital level, the higher quality innovation talent, and improve regional innovation capacity; this paper uses the average years of provincial education to measure this index. Industrial structure (strc) is a variable controlled by previous academic studies (Zhang Jie et al., 2016); literature studies suggest that the more emphasis on the secondary industry, innovation activities may be more active (Zhang Jie et al., 2016). The proportion of the state-owned economy (soe), in theory, suggests that it may increase innovation activity (Lin et al., 2010), the state-owned economic sector can easily obtain government funding and bank credit funds for innovation activities; on the other hand, it may inhibit innovation activities (Wu Yanbing, 2012), possibly due to the monopoly of the state-owned economic sector weakening the incentive mechanism for innovation research and development, which has an important impact on regional innovation capacity. Urbanization level (city) can gather the necessary resources including human resources, material resources and financial resources for innovation activities, and the higher the level, the more conducive to the smooth development of regional innovation activities.

Generally speaking, the more investment indicates that the innovation activities are active (Wu Yanbing, 2006). This index has a direct impact on the regional innovation ability. Government support for technology development (gf und), Innovative enterprises, especially high-tech enterprises, have experienced different development stages from embryonic stage to mature stage, Before reaching the growth period, Due to the failure of market choice and the inherent risk and uncertainty

of innovation, The government's support for its technology development can play an incentive effect (Wu Yanbing, 2006; Xu Ming and Liu Jinshan, 2017), Especially in the process of catching up in the latecomer countries, The government's financial support for innovation activities has a profound impact on national innovation activities (Amsden and Chu, 2003; Li Xibao, 2007), The influence of government support on regional innovation capacity is different. Human capital level (edu), a variable that is often controlled in both macro and micro research, market competition (mc) measures the proportion of non-state employment in each province in the total employment (Wu Yanbing, 2012; Qi Lan and Wang Yebin, 2013). The greater the proportion means that the provinces have less administrative intervention in innovation activities, the more active the market economy in the region, and then to the region the ability to innovate can have an important impact.

6. The effect of financial resource allocation on regional innovation capacity under government intervention

As for the influence of the credit fund allocation under the government intervention and the real economy, some academic literature appears in the theoretical research, but it still mainly focuses on the pure theory. There are relatively few authoritative documents on representative evidence in China, mainly including the most representative studies of Lin Yifu and Jiang Ye (2006), Liu Ruiming (2011), Qi Lan and Wang Yebin (2013).

Wang Renxiang and Xiao Ke (2009) sorted out the foreign empirical research literature on policy-based finance and innovation and found that the relationship between policy-based finance and innovation is mainly a one-way and promoting relationship. According to this paper, it can be inferred that the interference of endogenous problems is not obvious between policy-based finance and innovation. According to the research of Bai Qinxian and Wang Wei (2013), 90% of the loans are concentrated in infrastructure projects, basic industry projects and pillar industry projects with policy color. According to the above research, the empirical conclusion of this paper, which shows that CDB has promoted the improvement of regional innovation ability in the implementation of policy-oriented infrastructure projects, basic industry projects and pillar industry projects. However, have to question is, China development bank since its establishment in 1994, only the first four years as a full sense of policy Banks, the rest of the years the CDB are active on the road of development finance (hard, 2014), based on the industrial enterprise level, the bank of financial resources allocation is not significant to regional innovation ability and positive effect, whether based on the sample or based on the perspective of region, the positive effect does not exist, although the core of the coastal explanatory variable symbol is positive, but the coefficient is not significant in statistical sense.

7. Policy recommendations

First, we should firmly uphold the concept of finance returning to its roots, strengthen the allocation of financial-oriented resources for innovation-driven support, unswervingly promote the market-oriented reform in the financial sector, give play to the decisive role of the market in the allocation of financial resources of commercial banks, and reduce the government's intervention in the allocation of financial resources of commercial banks. We will continue to implement the market-oriented financial reform, greatly expand the space of the market mechanism in the allocation of financial resources of commercial banks, gradually make the market mechanism become the main body of the financial resource allocation of commercial banks, and give full play to the autonomy of commercial banks in the field of financial resource allocation. More importantly, under the allocation of resources in the market mechanism, we should ensure that more financial resources, especially credit funds, can flow to the non-state economy with the most innovative potential. Therefore, China's gradual reform path of rational choice should be to expand the market mechanism in the commercial bank financial resources allocation, reduce the government intervention in commercial bank financial resources allocation, to play a commercial bank financial resources allocation of positive support for

innovation driven development strategy, realize the smooth transformation of economic growth model.

Second, we should give better play to the "promising" role of the government in the field of financial resource allocation of policy banks, maintain the support of policy banks in the existing field, and greatly increase the allocation of financial resources in the future. The financial resource allocation of the Export-Import Bank of China can increase the number of patent output, but it is not performed in improving the sales revenue of new products. Nevertheless, the empirical results of coastal areas in this paper show that substantially increasing the financial resource allocation of the Export-Import Bank can be eager to improve the regional innovation ability. The reasons for maintaining are as follows: first, the current financial resource allocation of policy banks can improve the regional innovation ability; second, the policy banks once experienced the "crisis", if the transformation is successful, the financial resource allocation may be subject to the intervention of government departments as that of commercial banks, which may reduce the effect of improving regional innovation ability. Therefore, within the framework of the current policy banking system, the financial resource allocation should greatly increase the strength to support the regional innovation capacity of the future. Under the current degree of China's economic development, the institutional framework of policy banks should not undergo substantial changes in the long term, that is, it is premature for both policy banks to transform and privatize. And the substantial increase of the allocation of financial resources of policy banks within the existing institutional framework will greatly enhance the regional innovation ability, form an effective support for the innovation-driven strategy, and then cooperate with the smooth implementation of the fifth national financial work.

Third, we need to completely break the institutional barriers that restrain innovation-driven development and create an institutional environment conducive to innovation-driven development. The empirical study in this paper shows that the development quality of market-oriented reform system has an important impact on the improvement of regional innovation ability, and high development quality can help to play the positive effect of financial resource allocation to improve regional innovation ability; otherwise, it will encourage the financial resource allocation to reduce the negative effect of regional innovation ability. The theory of new institutional economics suggests that system is a "matrix" that influence and interact with each other; a good institutional environment can guide the allocation of resources to the productive field, while the bound institutional environment will lead to a series of rent-seeking and corruption, which increase transaction costs and hinder the development of innovation activities. Therefore, the future should actively build and foster innovation driven development of institutional environment, such as perfecting the legal system, strict rule of law, shaping market atmosphere, dilute nepotism, in the service of private enterprise innovation of financial policy, and strive to improve the quality of institutional environment, to ensure that the external institutional environment and financial system, especially the allocation of credit funds system coordination, commitment to the implementation of the innovation driven development strategy.

References

- [1] Stiglitz, J.E. and Weiss, A. Credit Rationing in Markets with Imperfect Information [J]. *American Economic Review*, 1981, 71(3):393-410.
- [2] Hsu Po-Hsuan, Tian Xuan, and Xu Yan. Financial Development and Innovation: Cross-Country Evidence [J]. *Journal of Financial Economics*, 2014, 112(1):116-135.
- [3] Zuo Zhigang. Financial structure and improvement of national innovation capacity: influence mechanism and empirical evidence [J]. *Financial Research* 2012(6):48-79.
- [4] Sun Wuqin, Wang Pei. Research on China's Financial Development and Promoting Technology Innovation [J]. *Management World*, 2013 (6): 172-173.
- [5] Zhang Yilin, Gong Qiang, Rong Zhao. Technological innovation, equity financing
- [6] and transformation of financial structure [J]. *The Management World*, 2016(11):65-80.

- [7] Boyd, J.H. and Smit h, B.D. Intermediation and the Equilibrium Allocation of Investment Capital: Implications for Economic Development [J]. *Journal of Monetary Economics*, 1992, 30 (3): 409-432.
- [8] Tadesse, S. Financial Architecture and Economic Performance: International Evidence [J]. *Journal of Financial Intermediation*, 2002, 11(4): 429-454.
- [9] Ayyagari, M., Demirgüç-Kunt, A., and Maksimovic, V. Formal versus Informal Finance: Evidence from China [J]. *The Review of Financial Studies*, 2010, 23(8): 3048-3097.
- [10] Lin, J.Y., Sun, X. and Jiang, Y. Endowment, Industrial Structure and Appropriate Financial Structure: A New Structural Economics Perspective [J]. *Journal of Economic Policy Reform*, 2013, 16(2): 109-122.
- [11] Merton, R.C. Financial Innovation and Economic Performance [J]. *Journal of Applied Corporate Finance*, 1992, 4(4): 12-22.
- [12] King R.G., Levine R. Finance, Entrepreneurship and Growth: Theory and Evidence [J]. *Journal of Monetary Economics*, 1993, 32 (3): 513-542.
- [13] Levine, R. and Zervos, S. Stock Markets Banks and Economic Growth [J]. *American Economic Review*, 1998, 88(3): 537-558.
- [14] Merton, R.C., Bodie, Z. A Conceptual Framework for Analysing the Financial Environment [M]. Boston: Harvard Business School Press, 1995.
- [15] Beck, T., Levine, R., and Loayza, N. Finance and Sources of Growth [J]. *Journal of Financial Economics*, 2000, 58(1-2): 261-300.
- [16] Xu Ming, Liu Jinshan. What financial structure is conducive to technological innovation- -theoretical deconstruction, practical orientation and enlightenment [J]. *The Economist*, 2017 (10): 54-64.
- [17] Rajan, R. and Zingales, L. Saving Capitalism from the Capitalists: Unleashing the Power of Financial Markets to Create Wealth and Spread Opportunity [M]. New York: Crown Publishing Group, 2003.
- [18] Kpodar, K., Singh, R.J. Does Financial Structure Matter for Poverty? Evidence from Developing Countries [R]. Policy Research Working Paper, World Bank, 2011.
- [19] Justin Yifu Lin. New Structural Economics- -The Reconstruction Framework of Development Economics [J]. *Economics (Quarterly)*, 2010, 10 (4): 1-32.
- [20] Gong Qiang, Zhang Yilin, Lin Yifu. Industrial structure, risk characteristics and Optimum financial structure [J]. *Economic Research*, 2014(4): 4-16.
- [21] Wang Yongqin, Gao Xin, Yuan Zhigang, Du Yulan. Financial development, asset bubble and real Economy: One, literature review [J]. *Financial Research*, 2016 (5): 191-206.
- [22] Justin Yifu Lin, Sun Xifang, Jiang Ye. Discussion on the theory of optimal financial structure in economic development [J]. *Economic Research*, 2009(8): 4-17.
- [23] Song, F. and Thakor, A.V. Financial System Architecture and the Co-evolution of Banks and Capital Markets [J]. *Economic Journal*, 2010, 120(547): 1021-1055.
- [24] North, D.C. Institutions, Institutional Change and Economic Performance [M]. Cambridge : Cambridge University Press, 1990.
- [25] North, D.C. and Wallis, J.J. Integrating Institutional Change and Technical Change in Economic History: A Transaction Cost Approach [J]. *Journal of Institutional and Theoretical Economics*, 1994, 150(4): 609-624.
- [26] North, D.C. Understanding the Process of Economic Change [M]. Princeton: Princeton University Press, 2005.
- [27] Bagehot, W. Lombard Street [M]. London: Henry S. King and Co, 1873.
- [28] Schumpeter, J.A. The Theory of Economic Development [M]. Massachusetts: Harvard University Press, 1934.
- [29] Levine, R. Financial Development and Economic Growth: Views and Agenda [J]. *Journal of Economic Literature*, 1997, 35(2): 688-726.
- [30] Greenwood, J., Jovanovic, B. Financial Development, Growth, and the Distribution of Income [J]. *Journal of Political Economy*, 1990, 98 (5): 1076-1107.

- [31] Benfratello, L., Schiantarelli, F. and Sembenelli, A. Banks and Innovation: Microeconomic Evidence on Italian Firms [J]. *Journal of Financial Economics*, 2008, 90(2): 197-217.
- [32] Lemaitre, N. Stimulating Innovation in Large Companies: Observations and Recommendations for Belgium [J]. *R&D Management*, 1988, 18(2): 141-158.
- [33] Bai Qinxian, Wang Wei. *An Introduction to Policy Finance* [M]. Beijing: China Financial Press, 2013.
- [34] Bai Qinxian, Qu Zhaoguang. Comparison of the policy-based financial institutions among the various countries [M]. Beijing: China Financial Press, 2006.
- [35] Bai Qin, Guo Gang. Exploring the theory and practice of policy-based finance in China [J]. *Finance and trade economy*, 2000 (10): 21-26.
- [36] Yang Di. *Financial resource allocation theory* [M]. Beijing: China Financial Press, 2011.
- [37] Jia Kang, Meng Yan. The future of policy-based finance: Necessity, Difficulties and solutions [J]. *Financial Research*, 2009 (3): 2-9.
- [38] Mckelvie, A. and Davidsson, P. From Resource Base to Dynamic Capabilities: An Investigation of New Firms [J]. *British Journal of Management*, 2009, 20(1): 63-80.
- [39] Alegre, J., Lauiedra, R. and Chiva, R. A Measurement Scale for Product Innovation Performance [J]. *European Journal of Innovation Management*, 2006, 9(4): 333-346.
- [40] [Cohen, W. M. Fifty Years of Empirical Studies of Innovative Activity and Performance [J]. *Handbook of the Economics of Innovation*, 2010, 1: 129-213.
- [41] Sun Wenjie, Shen Kunrong. Differences between human capital accumulation and the efficiency of technological innovation in Chinese manufacturing industry [J]. *Industrial economy of China*, 2009 (3): 81-91.
- [42] Wu Yanbing. Chinese industrial innovation level and influencing factors- -Empirical analysis of panel data [J]. *Industrial Economic Review*, 2006 (5): 155-171.
- [43] Qi LAN, Wang Yebin. Analysis on the influence effect of state-owned bank monopoly- -Based on the perspective of industrial technology innovation [J]. *Industrial economy of China*, 2013 (7): 69-80.
- [44] Xu Ming, Liu Jinshan. What financial structure is conducive to technological innovation- -theoretical deconstruction, practical orientation and enlightenment [J]. *The Economist*, 2017 (10): 54-64.
- [45] Amsden, A. H. and Chu, W. W. *Beyond Late Development: Taiwan's Upgrading Policies* [M]. Cambridge: The MIT Press, 2003.
- [46] Li Xibao. Empirical analysis of regional innovation capacity change in China: a viewpoint based on innovation system [J]. *Management World*, 2007 (12): 18-30.
- [47] Justin Yifu Lin, Jiang Ye. Economic Structure, Banking Structure and Economic Development- -Empirical analysis based on provincial panel data [J]. *Financial Research*, 2006 (1): 7-22.
- [48] Wang Renxiang, Xiao Ke. Research progress in the relationship between policy-based finance and independent innovation [J]. *Economic Dynamics*, 2009 (11): 110-113.
- [49] Lao Kaidi. The seven-year itch of CDB's commercialization reform [J]. *China Economic Weekly*, 2014 (32): 59-61.