2011 International Conference on Financial Management and Economics
IPEDR vol.11 (2011) © (2011) IACSIT Press, Singapore

An Overview of Financial Resources Allocation in China

Zheyi Liu[+]

Department of Economics, Kyushu University

Abstract: In order to observe financial resources allocation in China, we design an indicator (equilibrium coefficient) to measure the equilibrium level of the regional financial resources from 1978 to 2008. On the national level, the equilibrium level of financial resources allocation in China generally experiences three phases, and severe imbalanced allocation situation of financial resources appears between 1990 and 2000. Meanwhile, for the three regions of China, we find that most of financial resources have flowed into the east area these years. In contrast, the middle and west are outflow areas. The outflow phenomenon is the worst in the middle area, and most of its outflow capital is actually injected into the east area.

Keywords: financial resources, regional allocation

1. Introduction

Since the reform and opening up policy in 1970s, China has achieved remarkable success in economic development. In these thirty years, the average annual GDP growth rate is over 9%. From 1978 to 2008, based on the constant price in 1978, GDP has grown 17 times. However, the process of rapid economic development in China leads to some problems that could not be ignored. As the main policy of the economic reform, Chinese government has implemented a series of preferable development policies to the eastern coastal area. It is the aim and hope of the government that developing eastern coastal China first could bring along the development of the inland area, however, this has not yet been realized so far. The phenomenon of the continuous regional disparity in China is still worrying. Up to 2008, most of the affluent provinces are in the east area, and most of the poorer provinces are located in the west. Many facts show that inter-province economic disparity is widening with China's economic growth process.

The imbalance of economic growth among regions in China has aroused scholars' interests. Many economists have done researches on the reasons and causes of regional disparity. Some scholars have attributed them to China's industrial and urban development strategies (Lin and Liu, 2003). In addition, some other scholars analyze them from the viewpoints of geography, history, marketing, human resources, and policy (Kanbur and Zhang, 2005). Besides, there are other scholars who also analyze them from the perspective of financial development (Liu and Li, 2001). However, most of these studies focus on the quantitative indicator to measure the financial development and neglect the qualitative aspect. The literature, referring to the regional allocation of financial resources, is very few.

It is the purpose of this study to empirically analyze China's financial resources allocation and ascertain the potential financial cause of the regional disparity in economic growth, from the perspective of regional allocation of financial resources. This paper focuses on the basic financial resources (financial loans) and designs an indicator (equilibrium coefficient) to measure China's financial resource allocation from 1978 to 2008.

The remainder of the paper is organized as follows. Section 2 explains the method and calculation of the equilibrium coefficient. Section 3 observes china's financial resources allocation from both the national level and regional level. Section 4 concludes.

2. The Design of the Equilibrium Coefficient

[+] Corresponding author. Tel.: +81-926422450.
E-mail address: zheyiliu2011@gmail.com.

2.1. The Data and Source

Due to the unavailability of the data as well as the variety of the financial resources which could be measured, this paper uses the financial institutions' loans as a narrow sense indicator to measure the equilibrium level of the financial resources allocation. The equilibrium, mentioned in this paper, is not the absolute fairness among the geographical regions. It refers to a relative fairness which measures the level of one region's occupation of financial resources to the level of this region's economic output.

The data used in this research comes from various issues of *China Statistical Yearbook* and *Almanac of China's Finance and Banking*.

2.2. The Design of the Equilibrium Coefficient

We design an indicator to measure the equilibrium level of the financial resources allocation in China. First, we calculate the proportion of every province's GDP to the whole country's GDP and rank them in ascending order; then, locate province cumulative proportion of GDP into the X-axis orderly, which can be written as $LGDP = \frac{\sum_{1}^{i} GDP_i}{\sum GDP}, i = 1, 2, ...31.$

There are 31 provinces and municipalities, so the sample size is 31. After locating the X-axis, let the corresponding province's cumulative proportion of the financial resources (LFR) to be the vertical ordinate. Then by connecting these points, we obtain a graph which reflects a specific year's regional allocation of financial resources. The following graph is an example of year 2007.

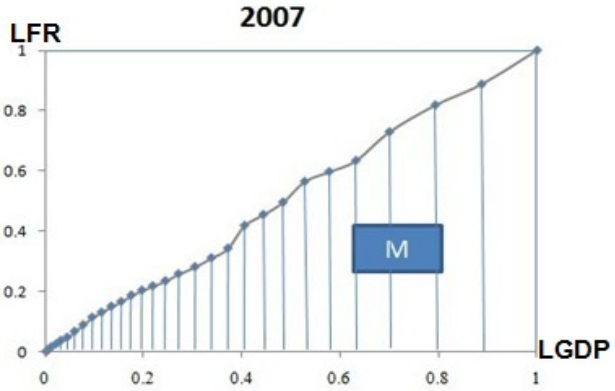

Fig. 1: Regional Allocation of Financial Resources in 2007.
Source: Author's calculation based on *Almanac of China's Finance and Banking (2008)*

If the financial resources are allocated in the most balanced manner, then this curve should coincide with the diagonal of square, which means region's possession of such amount of financial resources needs to bring corresponding share of GDP. Then we calculate the area M which is enclosed by this curve and X-axis. Changes in the area M reflect the changes of the equilibrium level of financial resources allocation among the regions. The smaller the absolute value of M minus 0.5 is, the more well-balanced the financial resources are allocated, and vice versa.

3. Descriptive Analysis

3.1. The National Level

According to the above calculation method, we can get yearly M value from 1978 to 2008. Then we depict these values with the M=0.5 straight line which represents the situation that financial resources are allocated among the regions in the most balanced manner. The changes of the curve, intersecting with the M=0.5 line, indicate the changes in the equilibrium level of China's financial resources allocation, as shown in the Figure 2.

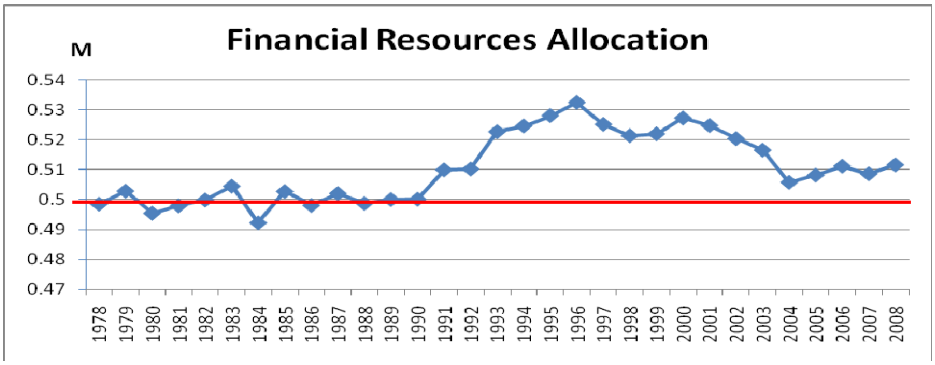

Fig. 2: Equilibrium of China's Financial Resources Allocation.

Source: Author's calculation based on various issues of *China Statistical Yearbook* and *Almanac of China's Finance and Banking*.

As shown in Figure 2, from 1978 to 2008, the curve of China's equilibrium level of regional allocation of financial resources generally presents the trends of "stable –upward –downward" wave.

During 1978 and 1990, although the equilibrium of the regional allocation of financial resources fluctuates, the overall trend is relatively stable. M values fluctuate around 0.5, and the curve becomes more and more close to the line M = 0.5. During this period, four state-owned commercial banks based on fiscal system had just been formed, and the allocation of financial resources was still under the government administrative rationing, rather than the market allocation. In fact the difference in financial development among the provinces was shrinking and financial resources tended to be balanced allocated among the regions.

From 1991 to 1996, China was transforming from planned economy to market economy, so the ways of planned allocation and market-oriented allocation were coexisting in the distribution of financial resources. In the early 1990s, a large amount of credit capital in China's west and middle areas was flowing into the coastal area to hype up the real estate projects there. Finally, M value reaches its peak in 1996, which indicates the lowest equilibrium level of regional financial resources allocation.

After 2002, Chinese government implemented the policies of *Revitalizing the old industrial bases in Northeast region* and *Uprising of central China*, resulting in the flow of massive special utilized capital into the middle and west areas. This, to some extent, has alleviated the regional imbalance in the financial resources allocation. As it is shown in the graph, the imbalanced allocation is suddenly alleviated in 2004. Since then, the allocation of financial resources remains at a relatively balanced level.

3.2. Regional Difference among East, Middle and West Area[1]

At the beginning of our research time period, eastern region has already occupied a relatively large proportion of the financial resources, and with the expansion of its economy, it goes on capturing a bigger share of the financial resources. For the middle and west areas, the ability of obtaining financial resources is relatively weak even from the beginning of the economic reform. With the deepening of the reform, their shares of possessed financial resources have some fluctuations, but overall, their total shares of financial resources are falling. In 2008, the total shares of the financial resources held by the middle and west areas fall to below 40%.

Compared with the middle and west areas, the east region has historical, geographic, economic advantages. Therefore, it gains the comparative advantages in infrastructure, industrial foundation, R&D capability and other aspects, which help the east area stand at a favourable starting point in the economic reform process. At the beginning of the economic reform, the east area's advantages are extended further by the development strategy, giving priority to the eastern coastal area, and the gradient development strategy in 1980s'. Later, government realized the seriousness of imbalanced regional economic development and adjusted the development strategy immediately. However, because of its comparative advantages, a massive amount of money is still flowing into the eastern region.

In order to observe the differences between economic growth and financial resources more directly, we depict the gap of each region's GDP proportion and its financial resources proportion in one figure (see figure 3). The formula is 'Regional GDP Share (%) − Regional Financial Resources Share (%)'.

[1] This paper divides China into three regions, which are the east, middle and west areas. The regional division criterion is raised by the government in the strategy for the development of the western region.

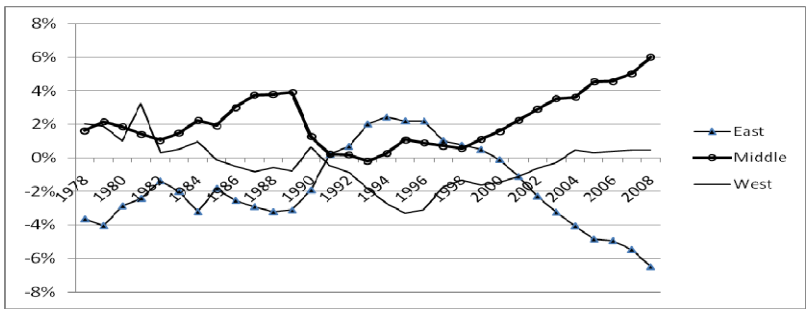

Fig. 3: Gap of Share between Financial Resources and GDP of East, Middle and West Area.

Source: Author's calculation based on various issues of *China Statistical Yearbook* and *Almanac of China's Finance and Banking*.

It is shown in figure 3 that the curves of the east and middle areas are broadly symmetrical along the X-axis. In the 21th century, the line of east area falls below 0, and the downward trend keeps going. The value of east area's GDP share minus its financial resources share becomes negative and this gap is widening. Meanwhile, the situation is the exact opposite of that of the middle area.

This indicates that a large amount of capital which is supposed to flow into the middle area actually flows to the east region. From the beginning, the middle area is not a priority of the government development policies and has not received much inflow of financial resources. A large amount of funds flow out. Moreover, financial supports from the government pay much more attention to east and west regions than the middle area. For the west area, limited by its own conditions, the ability to attract capital is relatively weak. However, west area receives both priority in policy and long-term funds support from the government. Financial resources processed by the west region become in line with its economic scale.

4. Conclusion

This paper uses financial institutions' loans as an indicator to empirically analyze China's regional allocation of financial resources and regional economic growth situation from 1978 to 2008. The research shows that:

From 1978 to 2008, the equilibrium level of China's financial resources allocation experienced three phases: before 1990, financial resources tended to be equally allocated among provinces; from 1991 to 2000, financial resources became unequally allocated, and the gap was expanding; after 2000, there was a slow adjustment to an equilibrium allocation.

From 1978 to 2008, the occupied financial resources shares of three regions keep the same changing trends with their regional GDP shares. East region is always the inflow area of financial resources, while the middle and west are outflow areas. The outflow phenomenon is the worst in middle area, and most of its outflow capital is injected into the east area.

5. References

[1] G. Boyreau-Debray. Financial Intermediation and Growth: Chinese Style. *World Bank Working Paper.* 2003, no. 3027, http://ssrn.com/abstract=636389.

[2] G. Boyreau-Debray, and S. Wei. Pitfalls of a State-Dominated Financial System: The Case of China. *NBER Working Pape.* 2004, no.11214, http://www.nber.org/papers/w11214.

[3] L. Guiso, and P. Sapienza. Does Local Financial Development Matter?. *The Quarterly Journal of Economics.* 2004, **119** (3): 929-969.

[4] R. Kanbur, and X. Zhang. Fifty Years of Regional Inequality in China: a Journey Through Central Planning, Reform and Openness. *Review of Development Economics*. 2005, **9** (1): 87-106.

[5] T. Liu, and K. Li. Impact of Liberalization of Financial Resources in China's Economic Growth: Evidence from Provinces. *Journal of Asian Economics*. 2001, 12: 245–262.

[6] Y. Lin, and P. Liu. Chinese Development Strategy and Economic Convergence. *Economic Research Journal*. 2003, 3: 19-25.