The Scale, Channel and Mechanism Analysis of Rural Funds Net Outflow in China: From 1950 to 2016

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Abstract

The paper studies net outflow of China's rural funds from 1950 to 2016, including scale, channels and mechanism. First, from 1950 to 2016, the sum of net outflow approximately is 26680.5 billion yuan, that is 398.2 billion yuan annually over the past 60 years. Second, there are three intervals that the net outflow of rural funds was showed positive, namely 1950-1955,1966-1977 and 1994-2016. Third, finance is the main channel for outflow while fiscal and investment are the main channels of inflow. In addition, insurance and price scissors difference of industrial and agricultural products can influence rural funds. Integrated above channels, this article proposes a mechanism framework of net outflow. It also tries to explore the reason why these channels cannot show theirs effects significantly based on grey relational theory. In order to relief the speed of net outflow and promote the development of rural economy, we recommend that we should increase the amount of rural capital investment, adjust the structure of capital investment areas, and improve the financing environment to achieve rural funds reflux.

Key words: Rural Funds; Net Outflow Channel; Mechanism; Grey Relational Analysis

Introduction

China is a great agricultural country. The issue of "agriculture, rural areas and farmers" has always been highly concerned by the Central Committee and all walks of life. The state has invested numerous human resources, material resources and financial resources to support the development of rural areas. The implementation of the rural revitalization strategy requires much capital investment. However, scholars' research finds that there is a phenomenon of “siphon” in rural funds (Cai Siping, 2004, 2005). The contradiction between rural liquidity shortage and China's excess liquidity caused by rural funds outflow is worth considering (Zhou Li, Zhou Xiangyang, 2009). On the one hand, the state injects funds into the countryside through fiscal and financial channels, on the other hand, it draws funds from the countryside to support the development of industry. The inconsistency in the development of agriculture and industry has made rural attractiveness less, which will make agriculture weaker. If these relations are not handled well, it will affect the fundamentals of national economic development, thus will affect the construction of industrialization, urbanization, informationization, and modernization. Since the founding of New China, how have rural funds flowed out, and how large is the rural funds gap caused by rural funds outflows? These issues will be related to the future of rural China. So, it is especially important to establish a rural capital return mechanism to help rural funds stay and play their due role. This paper analyzes the channels and mechanism for rural funds outflows to provide data and mechanism support for national policy.

This paper analyzes the scale, channels and mechanism of rural funds outflow from 1950 to 2016. The paper’s structure is as follows: the second part is to sort out the literature on the study of rural capital outflows in China and abroad; the third part is the scale of rural funds outflow from the five channels of fiscal, financial institutions, insurance, fixed assets investment and scissors difference; the fourth part integrates the channels of rural funds outflow, trying to systematically reveal the mechanism of rural funds outflow; the fifth part summarizes the paper and proposes corresponding policy recommendations.

Literature Review

Plenty of studies have shown that there is an outflow and gap between supply and demand of rural funds in China. (Wu Cuifang et al., 2007; Ba Hongjing, Guan Weijun, 2009; Ju Ronghua et al., 2009; Zhou Zhen et al., 2015). Some scholars have analyzed the first-hand data obtained through questionnaire survey to confirm the imbalance between rural financial supply and demand. Zhou Li (2005) found that rural financial demand has not been meet through the survey of Dongguan, Huizhou and Meizhou in Guangdong. The case study by the People's Bank of China Leshan City Center Sub-branch (2005) on Sichuan Qianwei County found that the contradiction between the demand for funds for agriculture, rural areas and farmers is greater than the supply of funds. As for scale, different scholars use different methods to measure the scale of rural funds outflows. Zhou Zhen et al. (2015) found that the outflow between 1978 and 2012 was about 266,627.58 billion yuan, with an average annual net outflow of 761.793 billion yuan. Wu Cuifang et al. (2007) found that the gap increased from 462.296 billion yuan in 1991 to 103.323 billion yuan in 2004.

Majority of scholars mainly consider fiscal channel and financial channel in their analysis. The fiscal channel mainly includes agricultural taxes, various fees, and financial expenditures on agriculture. The statistical caliber of financial channel is generally based on the deposit and loan data of rural credit cooperatives and postal savings institutions (Cai Siping, 2004; Yao Yaojun, He Pichan, 2004; Wu Cuifang et al., 2007), and a few scholars included data from commercial banks (Zhang Hongyu, 2004; Zhou Zhen et al., 2015). However, from the perspective of the entire financial system, there are still certain limitations, because there are policy banks and other formal financial institutions that have agricultural loans.

Fiscal and financial channel are the main channels for rural funds outflows. In addition, there are other channels of outflows: price channel represented by scissors difference for industrial and agricultural products (Lin Yifu, Yu Miaojie, 2009; Zhou Zhen et al., 2015); investment channel represented by securities and insurance (Jiangsu Province) Yancheng Rural Finance Society Research Group, 2003; Pan Zaijian, 2006; Wu Cuifang, 2009); rural migrants and township enterprises will also bring out the outflow of rural funds (Yang Wenxuan et al., 2007; Yi Yuanhong, 2013); The compensation for rural cultivated land occupation is low and not in place, resulting in the indirect loss of rural funds (Zhai Zhaoyan, Wang Jiachuan, 2004; Zhang Naixia, 2008); some scholars believe that there are other channels that will affect outflows, Pan Zaijian (2006) believed that there are also expensive education fees, the government's long-term tendency to disregard farmers and the involvement and

misappropriation of agricultural funds by relevant departments, and the withdrawal of foreign direct investment will contribute to the loss of rural funds, but lack in-depth analysis.

There is less literature about rural funds outflow mechanism, and lack of integration of channels based on systematic analysis. Ma Cheng and Yang Xiaoyu (2007) conducted a analysis of rural funds outflows from the effect of rural financial system reform and rural financial organization structure. Wu Zhiyuan (2007) compares the rural credit funds outflow from the financial ecological subject, internal and external adjustment on the perspective of financial ecology. However, there is no data support analysis and no specific outflow channels are considered. Long et al. (2016) constructed a framework of "elements-structure-function" theory analysis to study the distribution of rural human resources, land resources and financial resources, and proposed the re-engineering of rural industry in space, industry and society three aspects. As for the causes of rural funds outflows, scholars believe that the low efficiency of fund allocation and the imperfect rural financial system are the main reasons. Zhu Xi, Li Zi Nai (2006), Duan Xiaoyan et al (2014), Zhang Lezhu, Cao Junyong (2016) believe that improving the efficiency of rural credit allocation is the key to solve the problem. The development and influence of informal financial institutions needs to be given much attention (Zhou Li, 2005).

The main contributions of this paper are: (1) The time span is relatively complete. Most scholars have studied the outflow of rural funds since the reform and opening up (HUANG et al., 2006; Zhou Zhen et al., 2015), and rarely studied the period from the founding of New China to the time before the reform and opening up. ISHIKAWA (1967) studied the situation of China from 1949 to 1959, and Nakagane (1989) studied the situation from 1952 to 1985 on the basis of the ISHIKAWA hypothesis. This paper studies the situation from 1950 to 2016, with a long-time span, which can fully reflect the historical evolution. (2) Data statistics are more comprehensive. Scholars' research on financial channels generally only analyzes rural credit cooperatives and postal savings institutions, and does not involve other formal financial institutions. The data of this paper is the financial institution's agriculture-related loan data provided by China Financial Statistical Yearbook, which basically covers the statistics of agricultural loans in the financial field. (3) Integrate the channels for rural funds outflows, systematically propose mechanism analysis, and have reference value for realizing rural funds retention and constructing rural funds return mechanism.

The Analysis of Scale and Channel

Scissors difference channel: channel formed in specific historical stages

The difference in the price of industrial and agricultural products is considered to be a channel for rural funds outflows (Zhai Zhaoyan, Wang Jiachuan, 2004). It has two manifestations: ratio scissors difference and price scissors difference. Although some scholars have measured the amount of scissors difference in various ways (Yan Ruizhen et al., 1990; Wang Haitao, Lu Xiangyu, 2013; Zhou Zhen et al., 2015), but some scholars believe that the trend of simple price ratio change is unlikely to reflect the real situation of scissors difference. (Jin Xizai, 1984), "price scissors of industrial and agricultural products don't involve the value" (Han Zhirong, 1996). We believe that the difference in the price of industrial and agricultural products reflects the changes in the prices and the changes in the terms of trade of agricultural and agricultural products, which cannot be directly measured. Therefore, this paper draws on Lin Yifu and Yu Miaojie (2009) on the description of price scissors difference, saying that "the definition of price scissors difference is the ratio of the purchase price index of agricultural products (PPIFP) to the retail price index of industrial products (RRPIIP).

The price difference between industrial and agricultural products defined in this paper refers to the comprehensive price index of industrial and agricultural commodities calculated by the retail price index of rural industrial products, that is, the comprehensive price index of industrial and agricultural commodities equals the total index of agricultural production prices to the retail price index of rural industrial products. The comprehensive price index of industrial and agricultural commodities in Figure 1 reflects its increase or decrease relative to 1, that is, the calculated comprehensive price index of industrial and agricultural commodities minus 1. From the trend point of view, the agricultural product production price index has a large fluctuation, and the rural industrial product retail price index is relatively flat. The overall changes are similar, showing a certain degree of synchronization. From the histogram, the increasing years in which the comprehensive price index of workers and peasants are more than decreasing year, indicating that the purchase price of agricultural products has risen faster than the retail price of rural industrial products, and the trade conditions of industrial and agricultural products have been improved, which can slow the flow of rural funds to the industry to some extent.

It is also worth noticing that although there is a view that the scissors difference is a product of a specific historical stage, such as Wu Li (2001) believes that "if there is the existence of scissors difference, it is the period when country unified purchase and marketing until it ended

from 1953 to the early 1990s." Lin Yifu and Yu Miaojie (2009) mentioned that “the price difference between workers and peasants was no longer adopted in the early 1990s due to the establishment of a socialist market economic system,” Yan Ruizhen et al. (1990) mentioned “achieving the strategic goal of eliminating scissors in 2000”. Wang Haitao and Lu Xiangyu (2013) mentioned that “the price difference between industrial and agricultural products has been eliminated when the state officially announced the implementation of the market economy in 1992”, but the data in Figure 1 shows that China was between 1996 and 2000 and in certain years such as 2006, 2002, 2014, the comprehensive price index of industrial and agricultural commodities was less than 1. There is still a rise in the retail price of rural industrial products over the purchase price of agricultural products, which is disadvantage for farmers.

Fiscal channel: the traditional channel of net inflows

The fiscal channel mainly refers to the funds invested or drawn from the rural areas through the fiscal sector, mainly including the fiscal expenditures for supporting agriculture and the various taxes and fees for agriculture. The income earned by the government through the fiscal channel refers to the main tax revenue of agriculture, including agriculture and animal husbandry, deed tax, agricultural special product tax, tobacco leaf tax, and cultivated land occupation tax. From 1950 to 1985, it was the agricultural and animal husbandry, including cultivated land occupation tax, agricultural, forestry specialty tax and deed tax. Since 2006, China has eliminated agricultural and animal husbandry, agricultural special product taxes, and introduced tobacco leaf tax regulations. The burden of taxes and fees refers to the burden of farmers in the country, this indicator has been counted in the “China Agricultural Statistics” since 2011, including the payment of collective funds, villagers’ financing and labor, agricultural productive charges, and administrative fees, rural compulsory education fees, fines, and fund-raising apportionment. The government's expenditure on agriculture refers to the expenditure of the state finance for agriculture, including support for agricultural production expenditure, grain, agricultural materials, improved varieties, agricultural machinery and equipment, and rural social development expenditure.

According to statistics, from 1950 to 2016, the state fiscal showed an increasing trend in rural income and expenditure, and the total tax burden was basically stable. From 1950 to 1957, the state fiscal extracted about 10.493 billion yuan. From 1950 to 1955, the amount of funds was basically the same. From 1956, the agricultural expenditures were greatly increased, and the funds obtained were sharply reduced to 0.51 billion yuan. From 1958 to 2016, the state's fiscal expenditure on rural areas exceeded the income, and the annual net inflow showed an

increasing trend. Therefore, through the fiscal channel, the net inflow of rural funds was realized.

Investment channel: emerging channel of net funds inflows

Investment channel refer to the workload of the construction and purchase of fixed assets for the primary industries such as agriculture, forestry, animal husbandry and fishery in a certain period of time and the associated costs. The fixed asset investment of the whole society is a comprehensive indicator reflecting the scale, structure and development speed of fixed asset investment in rural areas. The statistical results in Table 1 show that, basically every 10 years, the investment in fixed assets of the primary industry is 10 times that of the same period. From 1981 to 2016, the total amount of rural funds inflows through the fixed assets investment channel was about 122,826.43 billion yuan.

Financial channel: the largest channel for funds outflows

Financial channel refers to the rural financial flows through the People's Bank of China, banking deposit-taking financial institutions, trust and investment companies, financial leasing companies and auto finance companies' agricultural deposits and agricultural loans. Bank deposit-based financial institutions include banks, credit unions and finance company. Financial institutions can be divided into the People's Bank of China, the National Development and Policy banks, state-owned commercial banks, other commercial banks, city commercial banks, rural commercial banks, rural cooperative banks, urban credit cooperatives, rural credit cooperatives, trust and investment companies, finance company, leasing company, postal savings bank, foreign financial institution, village bank, auto finance company. The total deposits refer to the savings of farmers and the agricultural deposits of financial institutions in the financial channel. The agricultural deposits of financial institutions from 1952 to 1977 were summed up by the National Bank and the Rural Credit Cooperatives. The total loan refers to the agricultural loans in the case of financial institutions' RMB credit income and expenditure. The total loans from 1952 to 1977 were summed up by the National Bank and the Rural Credit Cooperative Agricultural Loan. Since the China Financial Yearbook has changed the index to financial institution's domestic and foreign currency-related loans in 2011, the data names in 2010-2016 are different from previous years. From 2010 to 2016, there is a lack of agricultural deposit data for financial institutions. From 2015 to 2016, there is a lack of farmer household savings data. Therefore, from 2010 to 2016, the sum of “Banking Financial Institutions Total Liabilities Statistics” among China Financial Yearbook (2012, 2017) of rural commercial banks, rural cooperative banks, rural credit cooperatives, new rural financial institutions and postal

savings banks is represented as deposit data.

The data shows that agricultural deposits and agricultural loans of financial institutions showed an increasing trend from 1952 to 2016. The years when agricultural institutions' agricultural loans were larger than agricultural deposits were in the three stages of 1952-1956, 1962-1963, and 1984-1993. The years in which agricultural deposits exceed loans are also divided into three stages, namely, 1957 to 1961, 1968 to 1983, and 1994 to 2016. Through combing the financial channels, the paper finds that the result is consistent to three stages of the rural financial reform process analyzed by Zhang Lezhu and Cao Junyong (2016) . The first round of reforms, from 1978 to 1992, injected funds into the countryside to restore the construction of the rural financial system. Since the second round of implementation in 1993-2003 and the third round since 2003, although rural financial reform is conducive to rural development, it has made it easier for rural funds to flow out. In summary, from 1952 to 2016, rural funds outflow through financial channels totaled approximately 466,221.16 billion yuan.

Insurance channel: the fastest growing channel for funds outflows

Insurance channel refer to the realization of rural funds flow through property insurance companies' agricultural insurance premiums, indemnities and payments. The insurance channel data comes from the economic and technical indicators of the insurance business in the China Statistical Yearbook. The compensation from 1984 to 1996 is the determined compensation, and the remaining years are the compensation and payment.

According to statistics, although the agricultural insurance premiums and claims showed an increasing trend in 1984-1994, the difference between the two was more obvious. In 1984, 1988-1990 and 1992, agricultural insurance premiums were greater than claims. In 1985-1987, 1991, and 1993-1994, agricultural insurance premiums were less than claims. After that, the agricultural insurance premiums exceeded the agricultural insurance claims of other years. Since 2007, the amount of agricultural insurance has increased sharply. Compared with 2006, the premium of agricultural insurance has increased fivefold and the indemnity has increased fourfold. The premiums and indemnities for 2008 were 2.08 and 2.16 times in 2007. From 1984 to 2016, the scale of rural funds outflow through agricultural insurance was about 851.6492 billion yuan.

Summary: the scale of rural funds outflow is large

Based on the above analysis of rural funds by the fiscal, investment, financial and insurance channels, the net outflow of rural funds is summarized in China from 1950 to 2016.

The results are shown in Table 1. The total amount of funds flowing out of rural areas from 1950 to 2016 is about 266.805 billion yuan and the annual average net outflow is 398.217 billion yuan. It can be seen from Table 1 that the financial channel in the four channels is the main channel for the net outflow of rural funds, while the fiscal channel and the fixed assets investment channel of the whole society are the main channels for the net inflow. Although financial channel is also injecting funds into rural areas in several years, it is still the largest channel for outflows. In addition to a small amount of funds outflows in the first eight years, fiscal channel has been the main channel for net inflows of since 1958. Compared with financial channel, fiscal channel and investment channel, the rural funds flow is the smallest by insurance channel, and the speed of withdrawing funds is accelerating. In the future rural economic development, insurance channel will still be an important fund outflow channel.

Figure 2 shows the proportion of rural funds outflows accounting for the added value of the primary industry and the total output value of agriculture, forestry, animal husbandry and fishery. Since 1995, the proportion of rural funds outflows gradually increased. In 2009, it reached a maximum of 89.47% and 50.63%. After that, it quickly declined in 2012 and showed a gradual upward trend. This shows that the net outflow is relatively large, and the outflow is more serious. It can be seen from Table 1 that the net outflow of rural funds is more obvious. The rural funds in the three periods from 1950 to 1955, 1966 to 1977, and 1994 to 2016 were net outflows, except for a small outflow from 1957 and 1959, the remaining years are net inflows of funds. It can be seen from Figure 2 that the growth rate of the value added of the primary industry in the year of net inflow of rural funds is higher than the year of net funds outflow from the average level, indicating that increasing the investment of rural funds is conducive to increasing the growth rate of the value added of the primary industry. The outflow will restrict the development of “agriculture, rural areas and farmers”, therefore it is necessary to pay attention to the issue of rural funds outflows.

Compared the period before and after reform and opening up, the trend of rural funds outflows has not changed. Before the reform and opening up, because the country must vigorously develop industry, rural funds are an important source of funds for industrial development, so rural funds outflows have historical inevitability. After the reform and opening up, the channels for rural capital inflows and outflows have been expanded, and there are more channels for insurance and fixed assets investment in the whole society. However, there is still a large outflow, which is closely related to the liberation of rural productivity and the outward transfer of peasant labor.

The mechanism analysis

Rural funds can flow in and out through scissors difference, fiscal, fixed-asset investment, finance, insurance and other channels. Each channel plays a role in influencing different aspects of rural economic development. Therefore, it is particularly important to analyze the transmission mechanisms of these channels. This paper integrates the above channels and analyzes the mechanism of funds outflows, as shown in Figure 3.

The government has obtained funds from rural areas to support industrial development by artificially lowering the purchase price of agricultural and sideline products and increasing the retail price of rural industrial products. The changes in the purchase price index of agricultural and sideline products and the retail price index of rural industrial products reflect the changes in the terms of trade of agricultural products. The changes in terms of trade affect the supply and demand of farmers, which in turn affects the income and expenditure of farmers. Fiscal support for agriculture is an important source of funds for the development of rural areas, and it also obtains funds from rural areas by affecting the tax burden of farmers. Agricultural investment can improve rural infrastructure construction and rural ecological environment. The improvement of rural investment and financing environment will enable rural finance to be continuously enriched and developed, and the flow of rural funds will become more frequent. Banks' agricultural deposits and loans will affect the allocation of rural funds, which is reflected in the proportion of funds flowing to formal financial institutions and informal financial institutions, and indirectly reflects the system of rural financial systems. Agricultural insurance premiums and claims have provided certain guarantees for agricultural production, which in turn will affect farmers' income and rural economic development. These channels will affect the inflow and outflow of funds, which will affect the changes in farmers' income. Farmers are an important force in the country's construction, their development will affect the realization of the national industrialization, urbanization, informationization and modernization strategic goals.

The fiscal channel has the highest correlation with agricultural development, but its effect of slowing the outflow of rural funds is not obvious.

From 1984 to 2016, the three indicators of fiscal, investment, finance, insurance channels, total output value of agriculture, forestry, animal husbandry and fishery, per capita net income of rural residents, and added value of agriculture, forestry, animal husbandry and fishery were measured by grey correlation analysis method. Value processing, calculating the correlation coefficient of each year based on the absolute difference $\eta_{0i}(k) =$

$\frac{\min\min|x_0(k)-x_i(k)|+\rho\max\max|x_0(k)-x_i(k)|}{|x_0(k)-x_i(k)|+\rho\max\max|x_0(k)-x_i(k)|}$, Finally use the averaging $r_{0i}=\frac{1}{n}\sum_{k=1}^{n}\eta_{0i}(k)$ to reflect the information of correlation coefficient from 1984 to 2016, as shown in Table 2. It is found that the fiscal channel is the channel with the highest correlation with agricultural development, followed by the investment channel and financial channel, and the insurance channel has the lowest correlation. The four channels have the highest correlation with the total output value of agriculture, forestry, animal husbandry and fishery, and have the greatest impact on them.

Although the fiscal channel is an important channel for rural capital inflows, the state invests a large amount of money into agriculture every year, but it does not play a prominent role in slowing the outflow of rural funds. There are two main reasons: First, the burden on farmers is serious. Although the state abolished the agricultural tax in 2006, farmers still had to bear various costs. According to the data of China Agricultural Statistics, there are 7 major items that the farmers need to bear in the country, and each of them contains many sub-items, a total of 23 items. The expenses that farmers need to bear are numerous, the absolute amount considerable. Taking 2011 as an example, the national peasant burden was 41.947 billion yuan, accounting for 9.64% of the agricultural income of the year. In 2016, agricultural production charges reached 14.627 billion yuan. Second, the structure of financial funds is unreasonable. The expenditure of the state finance for agriculture is obviously insufficient in the allocation of the three costs of science and technology and the four subsidies for food, agricultural materials, improved seeds and agricultural machinery. From 1950 to 1962 and 1968 to 1970, there were no expenditures for the three expenses of science and technology. From 1992 to 2006, there were no subsidies for food, agricultural materials, improved seeds and agricultural machinery.

The construction of these projects will promote the improvement of agricultural labor productivity, thereby driving agricultural production and stimulating the enthusiasm of farmers. Since 2007, the national fiscal support for agriculture has been adjusted due to the reporting system, and its caliber is different from that of previous years. It is divided into seven aspects: agriculture, forestry, water conservancy, South-to-North Water Diversion, poverty alleviation, comprehensive agricultural development, and comprehensive rural reform. Among them, comprehensive agricultural development can explore rural demand and attract capital into rural areas, which is conducive to rural economic development. Although the expenditure on comprehensive agricultural development has increased year by year, compared with other aspects, the scale is still insufficient, and the capital allocation structure needs to be adjusted.

Financial channels are not only the main channel for rural funds outflow, but also the largest channel for funds inflows.

Although financial channels are the main channel for rural funds outflows, it cannot be ignored that it is also the largest channel for rural funds inflows. Dividing the financial channel agricultural loan data from the fiscal support agricultural expenditure data to obtain the financial-to-fiscal ratio, this paper finds that the funds injected into the rural areas through agricultural loans have always been larger than the fiscal support for agriculture. In 2016, the ratio reached 21.25. The financial-to-financial ratio also indirectly indicates that the financial investment is insufficient, and it is necessary to increase the scale of support for rural funds.

Although the scale of agricultural loans is large, it has not been able to slow the trend of rural funds outflows. An important reason is that there is a problem of unreasonable funds allocation structure in the financial channels. In the statistics of domestic and foreign currency-related loans of financial institutions in 2015, the proportion of other agriculture-related loans classified by use was at most 54.67%, but other agriculture-related loans did not know the details. The proportion of agricultural technology loans was only 0.17%, and the proportion of farmland infrastructure loans and agricultural production materials manufacturing loans was 1.27% and 2.59% respectively. These loans, which have an important impact on improving agricultural production efficiency, are not valued and will not be conducive to the long-term development of rural productivity. On the other hand, due to its natural profitability, financial institutions use their agricultural deposits for non-agricultural purposes, reflecting the urgent need for improvement in the rural business environment to attract capital backflow and increase the attractiveness of rural areas to financial institutions.\

The conversion of agricultural loans and fiscal support for agriculture to agricultural investment is low, and the lack of guarantees leads to serious loss of rural funds.

Drawing on the proportion of agricultural loans and fiscal support for agriculture invested by Wen Tao and Wang Yuyu (2005) into agricultural investment, this paper proposes the conversion rate of rural funds investment equal the fixed assets investment of the whole industry in the whole industry to the sum of agricultural loans and financial support for agriculture. A large part of the financial support for agriculture and agricultural loans has not been converted into rural fixed assets investment. The conversion ratio has decreased from 11.94% in 1981 to 5.61% in 2016, and the conversion rate of rural capital investment is only 2.37% at the lowest, which indicates that this should be applied. The loss of funds for the development of the rural economy is serious.

The correlation analysis of Table 2 shows that investment and rural development are inseparable. Although the scale of investment in fixed assets has increased year by year, investment channels have not retained funds well to support rural construction. This paper believes that there are three main reasons: First, farmers mainly use funds for housing construction and improve their living conditions, and are not used in agricultural production construction, not to mention the construction of rural infrastructure with long investment cycle; second, the low added value of agricultural products and the return on capital is not high, which leads to the lack of corresponding development of the plant and machinery for agricultural production. Third, agricultural production is affected by many factors, with instability, high risks, and lack of supporting safeguards, leading to social capital do not dare to enter the rural areas in large quantities, so rural fixed asset investment needs to cooperate with insurance.

From the perspective of insurance channels, since 2007, the difference between agricultural insurance premiums and claims and payments has been large. A large amount of funds has been placed in property insurance companies. Because of its property, insurance has caused existing social wealth due to disasters. The actual loss is compensated for in value and restored in use value, so that the social reproduction process can continue. Agricultural production has a certain degree of guarantee for agricultural insurance, but farmers cannot obtain additional benefits due to the payment of insurance premiums. Therefore, it is necessary to increase the coverage of insurance claims and payment conditions so that farmers can be assured of production and allow the society to invest with confidence.

Conclusions and Policy Recommendations

This paper sorts out the channels of rural funds outflow from 1950 to 2016 in China from the perspectives of scissors difference, fiscal, investment, finance and insurance. It finds that the fiscal channels and the fixed investment channels of the whole society are the main channels for the net inflow of rural funds. The financial channel is the main channel for the net outflow of rural funds, in contrast, although the insurance channel achieves the smallest scale of rural capital flows, it is the fastest channel for extracting rural capital outflows. After calculation, the scale of China's rural funds outflow from 1950 to 2016 was about 266805.1125 billion yuan, with an average annual net outflow of 398.261 billion yuan. Integrating the above channels, this paper analyzes the mechanism of rural funds outflows. The difference in the price of agricultural products by industrial and agricultural products affects the inflow and outflow of rural funds by affecting the trade conditions of agricultural products and agricultural resources, fiscal channels affect the burden of farmers' taxes and fees, investment channels through

affecting rural construction, financial channels through affecting rural funds allocation, and insurance channels affect agricultural production. This will affect the income and expenditure of farmers, which in turn will affect the realization of the national industrialization, urbanization, informationization and modernization strategic goals.

The situation of net outflow of rural funds in China has not been completely changed. In order to alleviate the outflow of rural funds, increase the stock of rural funds, and promote the development of rural economy, this paper puts forward the following suggestions: First, we must continue to increase the investment of “agriculture, rural areas and farmers”. The allocation of rural funds should be adjusted in terms of structure, especially the investment in agricultural science and technology research, and the enthusiasm for agricultural production and labor productivity should be improved. The second is to continuously improve the rural investment and financing environment, vigorously develop rural finance, revitalize farmers' savings and financial institutions' agricultural deposits, increase the attractiveness of rural investment, and guide more funds to the countryside. The third is to coordinate the rural financial investment system and the rural financing system, give full play to the role of agricultural insurance, and actively build a rural investment risk compensation mechanism to enable the rural capital return mechanism to achieve a virtuous circle.

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Table 1 Rural Funds Outflows Unit: 100 million yuan

year	fiscal （1）	financial （3）	Sum of net outflow	year	fiscal （1）	investment （2）	financial （3）	insurance （4）	Sum of net outflow
1950	16.36		16.36	1981	-81.86	-54.25	63.05		-73.06
1951	19.16		19.16	1982	-91.11	-76.14	94.06		-73.19
1952	18.31	-4.20	14.11	1983	-99.91	-53.89	131.28		-22.52
1953	14.44	-5.60	8.84	1984	-106.45	-54.47	-22.27	0.04	-183.15
1954	17.34	-2.90	14.44	1985	-111.57	-48.46	-18.78	-0.09	-178.90
1955	13.71	-0.80	12.91	1986	-139.68	-46.33	-77.13	-0.28	-263.42
1956	0.51	-21.60	-21.09	1987	-144.91	-76.90	-126.89	-0.26	-348.96
1957	5.10	1.40	6.50	1988	-140.38	-83.23	-207.40	0.23	-430.78
1958	-10.69	0.00	-10.69	1989	-181.00	-77.30	-209.20	0.22	-467.28
1959	-25.23	25.80	0.57	1990	-219.98	-97.83	-178.10	0.25	-495.66
1960	-62.48	7.90	-54.58	1991	-256.92	-122.04	-9.70	-0.87	-389.53
1961	-33.13	22.00	-11.13	1992	-256.83	-148.78	-52.40	0.02	-457.99
1962	-13.99	-22.60	-36.59	1993	-314.76	-120.93	-189.30	-0.86	-625.85
1963	-30.98	-18.60	-49.58	1994	-301.51	-177.93	1234.70	-0.35	754.91
1964	-41.09	2.80	-38.29	1995	-296.81	-498.13	4372.70	1.32	3579.08
1965	-29.24	6.40	-22.84	1996	-330.94	-587.03	1911.60	1.80	995.43
1966	-24.59	30.90	6.31	1997	-368.92	-647.69	7350.60	1.57	6335.56
1967	-16.69	46.60	29.91	1998	-756.00	-689.85	7744.80	1.52	6300.47
1968	-3.22	61.30	58.08	1999	-662.30	-704.09	8551.20	1.46	7186.27
1969	-18.47	49.90	31.43	2000	-766.19	-733.92	10109.21	1.00	8610.10
1970	-17.42	55.80	38.38	2001	-975.00	-1085.38	11193.2	0.00	9132.82
1971	-29.89	112.80	82.91	2002	-862.95	-1487.21	11285.46	1.00	8936.30
1972	-36.76	104.60	67.84	2003	-882.73	-1652.30	14664.66	1.19	12130.82
1973	-54.65	132.50	77.85	2004	-1435.41	-1890.70	16449.38	1.00	13124.27
1974	-61.15	158.70	97.55	2005	-1513.90	-2323.66	19280.22	1.00	15443.66
1975	-69.51	172.80	103.29	2006	-2088.96	-2749.94	23010.95	2.57	18174.62
1976	-81.35	151.70	70.35	2007	-2879.21	-3403.50	26904.40	23.58	20645.27
1977	-78.79	156.5	77.71	2008	-4266.11	-5064.45	34324.38	46.54	25040.36
1978	-122.26	18.96	-103.30	2009	-4804.17	-6894.86	42223.40	38.70	30563.07
1979	-144.82	46.65	-98.17	2010	-5147.85	-7923.09	17333.90	39.90	4302.86
1980	-122.28	37.24	-85.04	2011	-6145.66	-8757.82	16973.00	92.25	2161.77
				2012	-7326.58	-10996.40	20560.00	109.26	2346.24
				2013	-6484.83	-11027.40	22077.00	111.65	4676.38
				2014	-6746.79	-13802.80	29925.90	119.98	9496.33
				2015	-9535.90	-17542.10	44150.00	137.80	17209.76
				2016	-9901.42	-20917.60	74066.33	118.50	43365.86

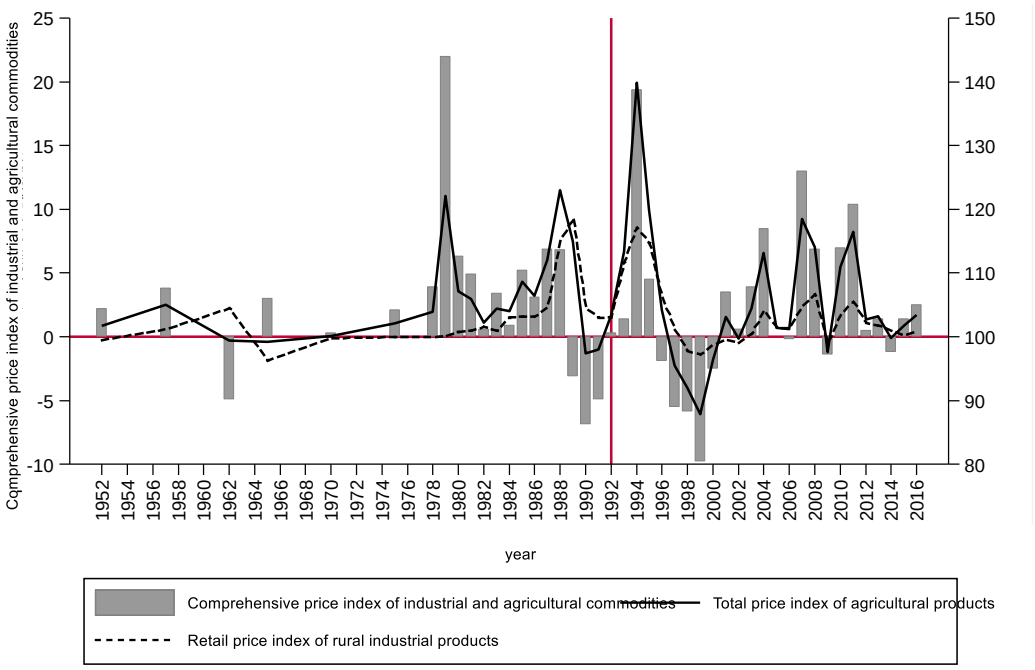
Data Source: China Financial Yearbook (1992), (2017), China Rural Statistical Yearbook (2012), (2017), China Agricultural Statistics (2011-2016), China Financial Yearbook (1988-2017), China Statistical Yearbook (1986-2017), China Fixed Assets

Investment Statistical Yearbook (1997-1999), (2003-2017)"

Table 2 Analysis of Grey Correlation Degrees of Four Channels from 1984 to 2016

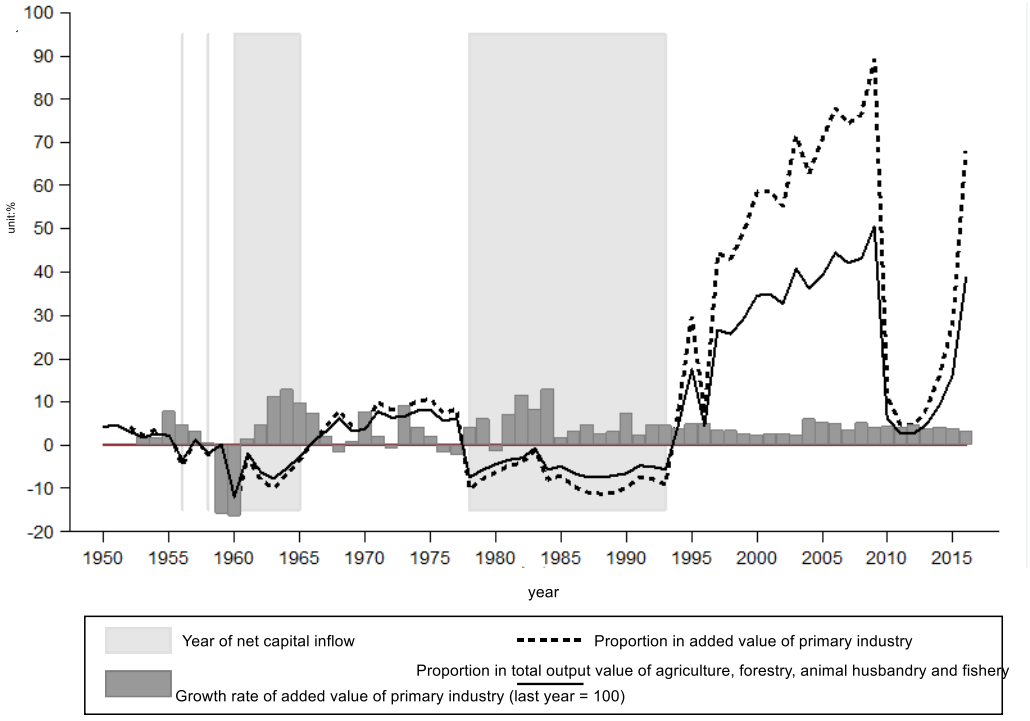
index	fiscal	investment	financial	insurance
Total output value of agriculture, forestry, animal husbandry and fishery	0.988633	0.97462	0.965141	0.849894
Per capita net income of rural residents	0.988012	0.973844	0.964275	0.849301
Added value of agriculture, forestry, animal husbandry and fishery	0.987957	0.973822	0.964333	0.849525

Data sources: The total output value of agriculture, forestry, animal husbandry and fishery and the added value of agriculture, forestry, animal husbandry and fishery are all from the National Bureau of Statistics. The per capita net income of rural residents comes from the China Rural Statistical Yearbook (2011, 2014, 2017).



Data source: China Rural Statistical Yearbook (2003, 2017), China price Statistical Yearbook (2017)
Note: the above price indexes are 100 in the past years;
Before 2000, the general price index of agricultural products was the purchase price index of agricultural and sideline products;
There is a lack of data for individual years from 1952 to 1978.

Figure 1 Trends in the three types of price indices



Source: National Bureau of Statistics

Figure 2 Analysis of the trend of rural funds outflow

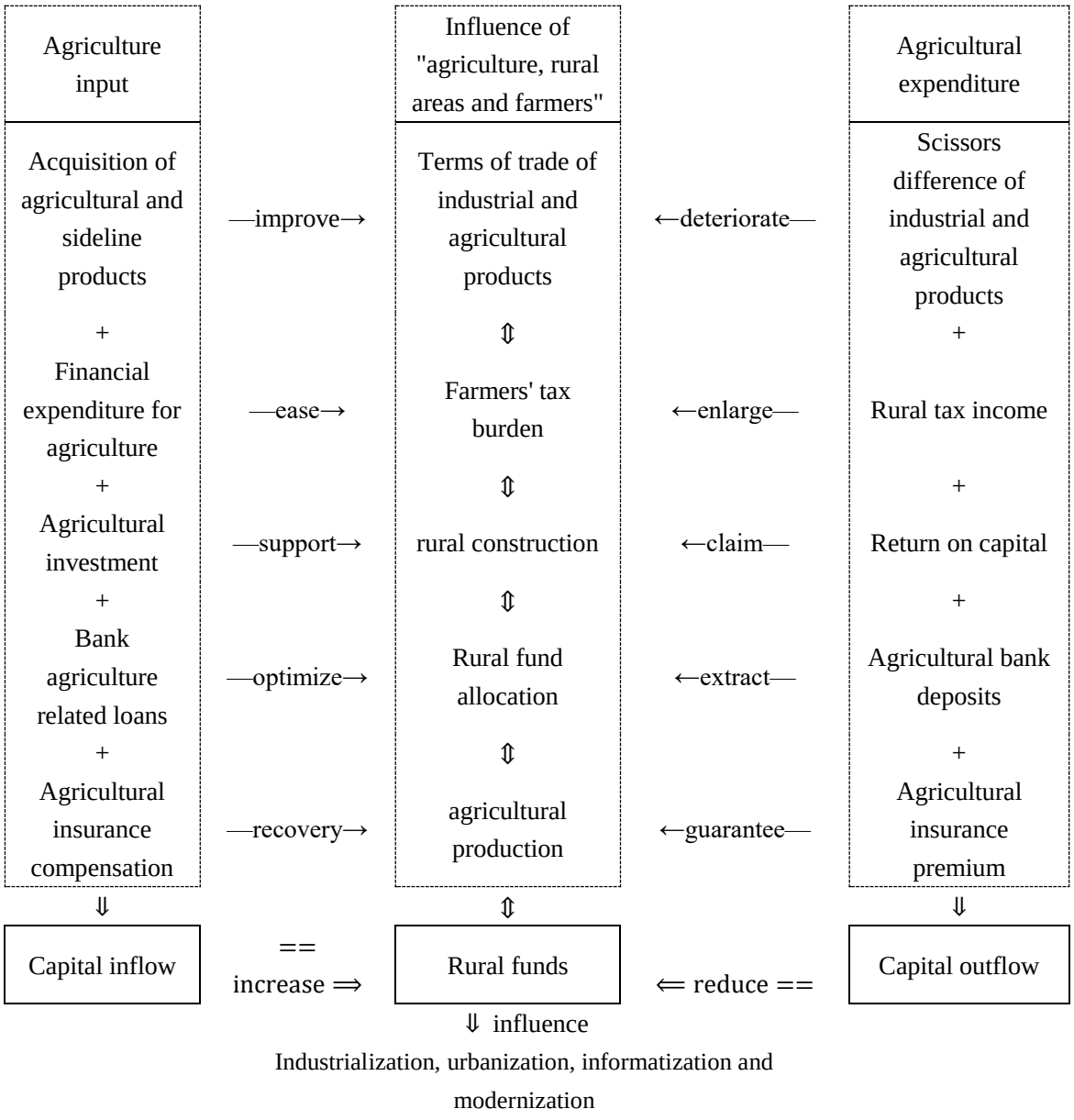


Figure 3 Analysis of rural funds outflow mechanism

Source: Author draws by himself