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The governance mechanism of new rural financial institutions: An analytical framework based on game theory

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ABSTRACT

Base on the appearance and actuality of new rural financial institutions, this paper describes its problem, and use game theory to analyze the cause of the problem. This paper points out that the cause of the problem is the governance of monitor corporate behavior is irrationality, which is executed by China Banking Regulatory Commission (CBRC). Secondly, the paper uses Prompting-Behavior-Aim model construct a new governance to solve the problem of prompting. Finally, the paper points out some advices on the new governance mechanism.

KEYWORDS

New rural financial institutions; Governance mechanism; China banking regulatory commission.

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INTRODUCTION

China Banking Regulatory Commission issued opinions on Adjusting and Relaxing the Access Policies for Banking Financial Institutions in Rural Areas and Better Supporting the Construction of New Socialist Countryside in 2006 December (Hereinafter referred to as "opinion"). Such opinions establish the new rural financial market access policy and open the prologue of New Rural Financial Institutions' development. Jiang Dingzhi (2010) point out that make great efforts to cultivate New Rural Financial Institutions is the internal need of improve rural financial services and the pressing requirement of rural areas. In a word, the establishment of New Rural Financial Institutions is good for releasing energy of private capital, and play a positive role in promoting rural financial system with the characteristic of diversified ownership, adequate competition, multi-tiered and multi-agent.

By the end of 2010, China totally has established 395 New Rural Financial Institutions, of which 349 country banks, 9 loan companies and 37 rural mutual cooperatives. The establishment of such New Rural Financial Institutions effectively remedy the inadequacy of rural financial supply. However, there are still 2312 financial institution blank countryside in need of financial service. In contract, the speed of New Rural Financial Institutions development is slightly slow, and the problem of lack financial service in county economy is still serious. So why can't new rural financial institutions come up speedily after opening capital enter policy? One of the important reasons is many New Rural Financial Institutions are deviated from its purpose, which is provide better service to "agriculture, rural areas and farmers", it's mainly include the following aspects:

First, there is a big bias between capital motivation and service purpose. The CBRC allowed the outside capital and private capital join into the construction of New Rural Financial Institutions. There are still many entry barriers for foreign banks join in the domestic financial market in reality. So the New Rural Financial Institutions afford a good opportunity for foreign banks, by construct the New Rural Financial Institutions, they can familiar with China financial market, accumulate financial experience and then extend there business in China.

For industrial capital, the purpose to construct the New Rural Financial Institutions is based on their own strategy. They can expend financial business in other areas to evade local bank credit business of regional restrictions; for private capital, the purpose to construct the New Rural Financial Institutions is to make their identity legitimacy. In a word, no matter outside capital, industrial capital and private capital, they don't have the purpose to support "agriculture, rural areas and farmers", and it's not consistent with the purpose of CBRC.

Second, the capital's "profits pursuit" makes the rural financial institutions business object deviates from "agriculture, rural areas and farmers". As is known to all, Agricultural financial business loan has the characteristic of small amount and high risk, which makes the agricultural loan high cost and low profit. That's the main reason for traditional financial business withdraws from the rural areas. The new rural financial institutions still will face the same situation, for example, For the loan company, non agricultural project loans rate generally higher than that of agricultural loan interest rate, this will make the business more to non agricultural project loans. For the rural banks, its operation mode is similar to the traditional commercial bank, loan lenders are required with mortgage and guarantee. So It's loans are more likely prefer to rural area blame farming business, or the larger rural industry, and cannot benefit those poor farmers who in real need of financial services.

Finally, the regulation issued by the CBRC has little effect to restrict the New Rural Financial Institutions' action. For example, Rural Banks Management Regulations Clearly defined rural banks can only loan within the county, and can't issue cluster loans. However, the CBRC can only monitor whether the rural banks' directly loan objects is the County resident or enterprise, and after the loan release, the funds flow is not restricted by the CBRC. It is possible to make capital absorbed from the county deposit outflows, and make the New Rural Financial Institutions become another rural capital "pumping machine".

In order to guarantee the development quality of New Rural Financial Institutions, China Banking Regulatory Commission issued three rules to explain the "opinion", these rules have made strict norms and requirements about institution types, capital limitation and business scope.

However, there exists prevailing information asymmetry between the China Banking Regulatory Commission and the New Rural Financial Institutions. This leads the regulatory mechanisms made by rigid rules can only act on the New Rural Financial Institutions' shell, but can't influence its business operation's kernel. Actually, Rural Credit Cooperatives Management Regulations had announced by People's Bank of China in 1997, the regulation states that Rural Credit Cooperatives' loan should first satisfy rural economy need. However, rural capital outflow and loan non-agriculture had become rural financial ailment. For example: from 1994s to 2006s, rural capital net outflow achieve 1.2 trillion yuan. If we still use the traditional financial institution governance mode, then we can't make sure such rural financial ailment break out again in the New Rural Financial Institutions. Besides, compare with Agricultural Credit Cooperative, the New Rural Financial Institutions lake of fundamental innovation and itself also face bottleneck restrictions such as less capital, weak credit, few outlets and high risk. IF such problem can't be solved effectively, then the New Rural Financial Institutions are exempt from escaping rural financial market.

Actually, administrative intervention is necessary for early rural financial institutions' development, but such government behavior must be effectively, such governance measures mainly by exterior supervision seems can't maintain the New Rural Financial Institutions stay in rural financial market by observing the New Rural Financial Institutions' construction state. Therefore, this paper proceed from the New Rural Financial Institutions' governance dilemma and based on organization behavior analysis form to construct a new governance mechanism. We aim to radically eliminate the flee incentive of rural financial institutions and propose specific policy suggestions.

GOVERNANCE DILEMMA OF NEW RURAL FINANCIAL INSTITUTIONS

In order to satisfy different levels of financial service demand, the CBRC issued "opinion" to encourage all kinds of capital to participate the New Rural Financial Institutions Construction. The CBRC and the New Rural Financial Institutions actually form a principal-agent relationship. As the clients, the CBRC's will is to add rural financial service supply. As the agents, the New Rural Financial Institutions' will is to gain financial market admittance and then make profit. So this principal-agent relationship itself exist goal conflict. Rural economy can difficult make profit guarantee as a week economy, so the New Rural Financial Institution has to take opportunistic behavior such as non-agriculture service and capital flee in order to pursuit profit. Therefore, the CBRC mainly take regulatory monitor mechanism to standardize the New Rural Financial Institutions.

So if the governance works? We are going to analysis the relationship between government and New Rural Financial Institutions through game theory.

First, we hypothesis the game participant include the government and the New Rural Financial Institution's sponsor (for short Sponsor); the government's action contain :(supervise, no supervise), which is the government may or not supervise the Sponsor. the sponsor's action contain:(loan to "agriculture, rural areas and farmers", no loan to "agriculture, rural areas and farmers"), which is the Sponsor may or not loan to the "agriculture, rural areas and farmers"(for short ARF).

We assume the rule of the game is: the sponsor should loan to "agriculture, rural areas and farmers (ARF)" according to regulations, but the ARF's loan income is lower; if the sponsor loan to the ARF, the government may have income, and if the sponsor doesn't loan to the ARF, the government many have little income, we hypothesis is the income is zero; the government can chose to supervise the sponsor's action, but the government will spend some cost on supervise; if the government chose to supervise, and the sponsor doesn't loan to the ARF, then the government will punish the sponsor. According to such game rules, the income of the government and the sponsor can be show as TABLE 1:

TABLE 1: Payoff matrix between government and sponsor

Sponsor Government	Loan for ARF	No Loan for ARF
Supervise	$S\text{-}C,\ R_1$	$-C+W,\ R_2\text{-}W$
No supervise	$S,\ R_1$	$0,\ R_2$

In TABLE 1's payoff matrix, S represent government's income when the sponsor loan to the ARF, and the S is zero when the sponsor doesn't loan to the ARF; C represent government's cost when it supervise the sponsor; R1 represent the sponsor's income when the sponsor loan to the ARF, R2 represent the sponsor's income when the sponsor doesn't loan to the ARF, and we hypothesis R2 > R1; W represent the punishment when the sponsor doesn't loan to the ARF, and we hypothesis the government can find the sponsor's each no ARF loan action and make punishment.

According to the payoff matrix, if C > W, the game's Nash Equilibrium is (no supervise, no loan to the ARF), which is the government will not supervise the sponsor and the sponsor will not loan to the ARF. So whether C > W can be proved in reality? Limited by its own organization structure, the CBRC can't supervise each New Rural Financial Institution, so there is an big information asymmetry between the CBRC and the New Rural Financial Institution. The model hypotheses the government can find the sponsor's each no ARF loan action and make punishment, then the supervise cost will be very big, which means C > W is feasible in reality.

According to such game analysis result, the CBRC's present supervise measure can not prevent financial capital from escaping rural economy, which means such governance mechanism is useless.

CONSTRUCTION OF NEW GOVERNANCE MECHANISM

According to organization behavior theory, individual behavior is influenced by individual motivation, and individual motivation is determined by the excitation (as Figure 1 shows). Therefore, China countryside is an organization, The CBRC is organization manager, and the New Rural Financial Institution is the individual within the organization. Based on the incentive, behavior and goal analysis paradigm, individual behavior is influenced by individual motivation directly. The existing administrative supervision measures can only restrain the new rural financial institutions action from the formal, and can not fundamentally change the new rural financial institutions' "escape" motivation. Once the time is ripe, the new rural financial institutions will choose " escape ", and the goal of the CBRC is still unable to achieve.

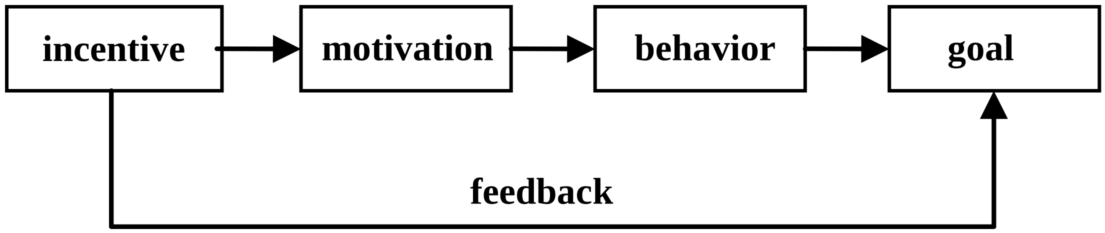

Figure 1: Incentive, behavior and goal analysis paradigm

Take a close look at this analysis paradigm, the key to reach the organization goal is to take proper incentive measures on the individual, so as to stimulate individual benefit the organization motivation, and then guide the individual to exist efficient behavioral responses, and ultimately achieve the organization goal; The organization goal's achieving will form a further incentive through some positive feedback, thus producing a benign "self- implementation" circulation process. Therefore, reasonable incentive mechanism is the important premise to achieve organizational goals, and the CBRC lack of effective incentive during the construction of New Rural Financial Institutions. Thus, we can establish a new governance to make the increasing supply of rural financial services become a "self- implementation", that is to say, even in the absence of government supervision, the rural financial capital will not choose to "escape".

We reconsider the game between government and sponsor, we hypothesis the government change some supervise cost C to financial subsidy, and the subsidy is C', and doesn't afford financial subsidy to financial institution which doesn't loan to ARF, both sides' income can be show by TABLE 2:

TABLE 2: Payoff matrix between government and sponsor

Sponsor Government	Loan for ARF	No Loan for ARF
Supervise	S-C, R_1+ C'	-C+W, R_2-W
No supervise	S- C', R_1+ C'	0, R_2

According to the payoff matrix, if C' > R2 -R1, which means the government can make subsidy to the sponsor, then loan to ARF is the sponsor's dominant strategy, and the game's Nash Equilibrium is (no supervise, loan to the ARF). In a word, if the government can afford financial subsidy to the New Rural Financial Institutions, then New Rural Financial Institutions will loan to ARF even the government doesn't supervise.

Actually, our government have clearly emphasized the importance of strengthen effective links between fiscal policy and rural financial policy in the CCP Central Document NO.1 (2011). Through financial subsidies, government can make a positive incentive to the New Rural Financial Institutions, and then produce great lever effect after the combination of fiscal policy and rural financial policy. So the government can make the increasing supply of rural financial services become a "self- implementation".

CONCLUSIONS AND SUGGESTIONS

Based on the appearance and actuality of new rural financial institutions, this paper describes its problem, and use game theory to analyze the cause of the problem, and then construct a new governance to solve the problem. This kind of governance mechanism is not concerned with supervision of new rural financial institutions act, but to motivate. By using such governance mechanism, the government can make its service" vulnerable groups" promise become a "self-implementation" contract. For the implementation of this governance mechanism, we can implement it from the following two aspects:

First, establish a multi-level financial subsidy mechanism. The present financial subsidy mainly afford by the central finance. However, the central government's finance power is limited, we should build a multi-level financial subsidy mechanism. Specifically, on the one hand, we Should make further effort to refine financial subsidies standards, and pay attention to the loan balance, at the same time, put the loan nature as an important evaluation index in order to prevent financial subsidy's object error happen; on the other hand, we should actively guide the local government involved in financial subsidies, and balance the New Rural Financial Institutions' financial unbalance problem caused by financial ecological environment differences through the coordination of central government and local government.

Second, construct the effective internal supervisory mechanism. Actually, the government can inject capital to the New Rural Financial Institutions besides financial subsidy, and then elect board members as shareholder. From the corporate governance perspective, The board directors have more private information about the company, and are more likely to conduct effective supervision. Therefore, the government can take supervise and guidance on the New Rural Financial Institutions' business, thus more effectively provide financial service to the rural.

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