

Researches on Factors Influencing Forestry-processing Enterprises whether to Provide the Trade Credit to Farmers

¹Qin Tao, ²Deng Jing, ³Yin Mengling

^{1, First Author} School of Economics and Management, Beijing Forestry University

qintao415@126.com

^{*2, Corresponding Author} School of Economics and Management, Beijing Forestry University

bfudengjing@126.com

³ School of Economics and Management, Beijing Forestry University

yml1454721167@163.com

Abstract

Timber- processing enterprises trading with the forestry farmers through the means of afforestation together or the order form forestry to conduct trade credits can efficiently transfer the funds to forestry farmers, which not only can alleviate credit constraints, but also can ensure the raw material supply for the Timber- processing enterprises . In this thesis, we carried on metric analysis on the influences of Forestry- processing enterprises providing the trade credit to forestry farmers. The study results show that: The tension of the corporate money has obvious influence in determining whether it provides trade credit to forestry farmers. The enterprises' dependence on raw materials is the key factor which determines whether forestry- processing enterprises provide the trade credit to forestry farmers. Finally, we will put forward the corresponding policy recommendations of promoting forestry- processing enterprises provide trading credit to forestry farmers.

Keywords: Leading forestry enterprises, Trading credit, Commercial standing, Order form forestry

1. Introduction

With "Order form agriculture" beginning to be popular in china in the 1990s, agricultural leading enterprises provided trade credit order through credit sales seeds, advance payment or productive loans, providing technical services or other ways for the agricultural farmers. Development of "order form agriculture" can not only integrate the demands of agricultural leading enterprises and farmers, but also import the scattered farmers into the market, bring in new technology, new production elements, meanwhile, improve the efficiency of agricultural productivity. So it is an important means of improving agricultural income and increasing benefits.

However, among the leading enterprises who participate in the order form agriculture, few has succeeded in giving trade credit to related farmers, owing to low execution rate .For the enterprises succeeding operating trade credit, when considering the risk and cost they would rather afford the trade credit which is small and narrow, which is far from satisfying the scattered farmers' demand for finance in rural credit market let alone the standard share that rural credit market should occupy in international trade credit market .

Order form agriculture and its trade credit system which has been proved to be effective in the world is developing so slowly in China, leading to the failure of relieving farmers' credit constraints functions. Along with the comprehensive reformation of forestry right system, leading forestry enterprises have been developing rapidly. And the mode of "enterprise + base + farmers" is also becoming mature day after day. The problem that they cannot directly get loans from financial institutions and credit constraints. Wood industry limited companies in YongAnShi, Fujian province provide farmers with financial support in afforestation by way of "company + peasant household". This company also ensures the supply of raw materials through purchase contract with forestry farmers. What's more, Research has found that, on one hand, enterprises desire to ensure the supply of raw materials, reduce the cost and risk of purchasing scattered raw materials, and save the fees of operating forestry base; on the other hand, forestry farmers need finance for afforestation, help from enterprises to strengthen their ability to resist risk. Based on above factors, the two sides, forestry enterprises and forestry farmers, have motivation to cooperate. Certainly, the active participation of forestry departments and relevant organizations is essential condition to reach the credit agreement. This article

choosing forestry products processing enterprises as the research object, mainly concentrates on the empirical analysis on the main factors of influencing the trade credit, and then discusses the possible ways of expanding enterprise credit supply, so as to provide basis for decision makers to formulate relevant policies.

2. Theoretical framework and research hypothesis

In many countries and regions farmers get credit agricultural production materials from supplier of agricultural input products (supply of seed, fertilizer, pesticides, agricultural machinery and so on suppliers), or buy from agricultural products business (including rural agents, processing factory owners, wholesalers, retailers, etc.) for agricultural products sales of advance payment, or directly have access to loans in the form of cash, and finally repay the loan through the sale of agricultural products. The trade arrangement between enterprises and farmers combine commodity trade and credit trading, which is defined as “the trade credit”, a kind of interconnected or bind credit loans. This kind of credit is an important and widespread form of informal finance on the rural financial market in china. Many theories and practices show that it has obvious advantages in overcoming the information asymmetry, high transaction costs, lack of collateral and the high default rate on rural credit market, and can play a positive role in effectively easing the credit problems common farmers facing [1].

Through the way of loaning the trade business finance and then onlending to farmers, banks can reduce the transaction costs. The research about the Philippines demonstrates the interconnection mechanism can not only reduce the risk of default (in fact is a kind of collateral replacement), but also can control the sales channels of agricultural markets. As traders provide credit, they usually purchase farmers' agricultural products at the lower price than market price. Due to the high transaction cost and default risk of affording the scattered farmers credit, commercial banks and even cooperative financial institutions are not willing to providing financial services, which is essential for the farmers to introduce new elements, new technology. The fusion of credit and sales is a powerful tool of solving the problem of small farmers' traditional bank mortgage loan.

The trade credit or cooperation afforestation based on the order form forestry is actually an interrelated mechanism between product trading and credit trading. Forestry products processing enterprises sign a contract on all aspects of production, sales and imposition before the formal production. The agricultural bank, rural financial institutions and rural credit cooperatives institutions take enterprises' credit as a guarantee. Then forestry enterprises loans to farmers on the basis of the income brought about by cooperation between enterprises and farmers, and farmers can be engaged in the processing and business operation [2-7]. This mode is suitable for the products which are heavily demanded or popular in a certain region or larger range.

Financial institutions loan on the basis of order holding by the farmers for guarantee or mortgage. Order form forestry will not only effectively connect the scattered farmers with forestry technology services, but also combine the dispersed farmers with guaranteed, profitable product market. Trade credit will be an important source for farmers to receive money, a kind of alternative of gaining loans from formal financial institutions. Forestry enterprises can make full use of the information captured by the previous transaction activities, grasping of the reputation, production and business operation ability, property income of the borrowers (farmers), and then reduce the possibility of failure in forestry production and operation, the risk of the borrower's credit. In order to encourage the borrowers to repay loans the forestry enterprises can directly deduct the money from the payments due to farmers, no longer having to providing the “dynamic threat” in the future. What's more, at the same time, the enterprise can gain a stable source of raw materials through the imposition of signed order [8].

To some degree, order form forestry is a kind of concrete application of collateral alternative mechanism. On one hand, forestry farmers mortgage their trees to the forestry enterprise as collateral(or substantially reverse mortgage), while the forestry farmers obtain capital from the enterprise (physical or monetary form).On the other hand, forestry enterprises get loans from bank with its own assets as collateral. And at the same time it will get a forward contract from farmers for the raw materials. According to the above theoretical analysis and the characteristics

of trade credit system, this article gives the following hypothesis about the influence factors of trade credit that forest products processing enterprises provide to forestry farmers:

(1) The capital of forestry enterprise is relatively sufficient and faced with lower credit restraint degree from formal financial institutions. So they have greater chance to afford forestry farmers trade credit.

(2) When the dependence of enterprises to the raw materials of forestry farmers is stronger, the more they are willing to provide farmers with trade credit, in order to ensure the quality and quantity of raw material supply.

(3)The government departments or forestry cooperative economic organizations involved in trade credit as securer and supervisor in the contractual relationship between enterprises and farmers can encourage enterprises to provide farmers with trade credit, and, to a certain extent, to ensure the execution rate of trade credit agreement.

(4) The longer time the cooperation took between enterprises, the more familiar with the production, status, personal credit of forestry farmers' forestry enterprises will be and more willing to provide trade credit.

(5) the stronger control of the enterprises to forestry farmers, that's to say, if enterprises can stop farmers' behavior "sales outside the contract" through the effective way, and ensure product recycling, the more willing forestry enterprises to affording them trade credit.

3. The source of data and basic characteristics of samples

3.1. Data sources and research methods

The data of this research is from on-the-spot investigation in ShaXian and QingliuXian, Fujian province conducted by our team during July-August in 2011. The local forestry products processing enterprises are our research subject. We mainly do deep research on enterprise organizations, their asset characteristics, the leaders and employees of relevant enterprises, production technology and cost of the main products, marketing status, enterprise credit, credit situation and source of enterprise raw materials, the contractual relationships between enterprises and farmers, government's support and evaluation and prospect estimation to business environment, etc. This research took the way combining the investigation by questionnaire with depth interview. We in all issued 78 questionnaires altogether and received 85, among which of five samples key variable data missing, so finally there were 73 effective enterprise samples.

3.2. Basic situation of enterprise

In the 73 effective enterprise samples obtained, according to the registration region of enterprises, 39 at ShaXian, 34 at QingliuXian. The business scale of the enterprises is involved in all aspects of forestry product processing, and generally can be divided into wood products, bamboo products and purchasing and planting of bamboo, details are shown in table 1.

Table 1. Investigation on the classification of the industry enterprise

Wood processed products		bamboo processed products		other types	
Name of product	The number of enterprises	Name of product	The number of enterprises	Name of product	The number of enterprises
sawn timber processing	3	bamboo floor manufacturing	2	nursery and forest	6
wood processing	2	bamboo furniture manufacturing	2	wood cutting and planting	12
man-made board manufacturing	24	other bamboo products processing	3	Wood pulp and paper production	1
wood floor manufacturing	7				

wood furniture manufacturing	4
timber harvesting	2
other wood processing	5

Because the scale of forestry enterprises is generally small, the majorities of enterprises mainly take one kind of the products (many types) as the leading product, and keep relatively small share of other products. So the variety of enterprise products is relatively single. Among them, there are 32 enterprises with a single product, accounting for 43.8% of the total number of valid samples; only 11 whose variety of main products is in excess of three kinds of, accounting for 15.1%; the rest of the 30 enterprises mainly producing two products, accounting for 41.1%. Seeing from the annual worth of main products, the annual output of major enterprises is small, below 10 million yuan, accounting for 70.2% of the total sample; only four of the enterprises with an annual output value reached 50 million yuan, the largest annual output value reached 100 million yuan.

In the process of forest right system reform, with the innovation of the modes of forestry financial services, new forms of trade credit, such as the imposition of a certificate for mortgages, credit funds of rural credit cooperative institutions being given to forestry farmers through the industrialization of leading forestry enterprises commitment; Or, forestry enterprises directly sign agreement with farmers on “afforestation” cooperation, under which farmers responsible for woodland and the daily management, the enterprise responsible for investment afforestation and cutting planning, forest products acquisitions. These trade credit provided by the forest products processing enterprises can solve the capital demand of forestry farmers, and enhance their ability to resist natural and market risk; For enterprise, it also can ensure the raw material supply, reduce the scattered procurement costs and risks, and save the cost of operation and management of base construction.

In order to meet their own supply of raw materials, the survey found that some of the forestry products processing enterprises provide trade credit to farmers in various forms, such as credit sales, fertilizer and pesticide, or pay a certain percentage of payment in advance, acting mat forestry tax or cut down costs, providing the cost of cutting design, technical guidance, service machinery and equipment, as well as the imposition of a loan to provide guarantee, etc. However, not all product processing enterprises are willing to providing trade credit to farmers. In the survey of 73 companies, 35 companies provide the trade credit to farmers, accounting for 47.95% of the total number of valid samples; Seeing from two areas, the number of companies that provide trade credit and fail to provide the trade credit almost equires, consistent with the overall situation, and showed no obvious regional differences. Therefore, forest products processing enterprises offering farmers trade credit has not yet become a common phenomenon. Since it is beneficial to both parties, why not to be able to effectively develop the trade credit? The supply of trade credit is a comprehensive decision-making which is influenced by many factors. Therefore, many specific factors of trade credit must be taken into consideration from all aspects.

4. Empirical models and analysis on results

In order to test the above assumptions about factors that determining the forest products processing enterprises whether provide trade credit to farmers, and further to research the influence degree of each factors and significance. This article has established econometric model showing the enterprise how to provide the trade credit to farmers, and applied the sample data of 73 forest products processing enterprises in two counties, ShaXian and QingliuXian for analysis.

4.1. Model hypothesis

According to the assumption took in this article, whether forest products processing enterprises provide trade credit may mainly influenced by the following factors: finance situation of enterprises (financial strain degree) (M); Enterprises’ dependence on raw materials (D); If there is a third party (government departments or intermediaries) involved in (T); The length of time of trade relationship between enterprises and farmers (R); The enterprises’ control to farmers(C). Models can be described

in the following form: $S_i = F(M_i, D_i, T_i, R_i, C_i) + e_i$, where S_i represents whether the enterprise i has provided the trade credit to farmers; e_i represents random error term. Measurement estimation model selects Logistic regression model. The specific form of the model is as follows: $\ln \left[\frac{p}{1-p} \right] = b_0 + b_1 M + b_2 D + b_3 T + b_4 R + b_5 C$.

4.2. Variable selection and description

In view of the specific characteristics of forest products processing enterprises and farmers and combining with the specific data of the investigation, the influencing factors in this model choose variables stated below:

Table 2. Design and description of model variables

variable	Indicator	name	meaning	method of measurement
explained variables	S_i	Whether to provide trade credit	Whether enterprise has provided the trade credit to farmers	1=yes
				0=no
explained variables	M_i	The tension degree of enterprises' funds	Whether the fund of enterprises is enough during the operation	5= severely
				4=not enough
				3=general
				2=enough
explained variables	D_i	The degree of dependence upon raw materials from the forestry farmers	The proportion of the number of raw materials from farmers accounting for in all raw materials (%)	1=adequate
				-
				-
				-
explaining variable	T_i	If there is a third party participating in	Local governments (county, township and village) or the competent forestry authorities, forestry cooperative economic organizations (cooperative farm or association), acting as helpers and supervisors, involved in the process of trade .	1=yes
				0=no
explaining variable	R_i	The length of time the trade relationship between enterprises and farmers	months from the date registered to the date being surveyed	-
				-
explaining variable	C_i	The control of the enterprises to implementation of forestry farmers	What enterprises can do if farmers can't pay back loans	5=very strong
				4=strong
explaining variable	C_i	The control of the enterprises to implementation of forestry farmers	What enterprises can do if farmers can't pay back loans	3=general
				-

4.2.1. The tension degree of enterprises' funds (whether the enterprise is facing credit constraints)

Compared to credit constraints the farmers faced with, the enterprises are more easily obtain credit support from the formal financial institutions through assets mortgage. At the same time, enterprises also have other financing channels, such as private financing, folk financing by shareholders or listed financing, etc. Therefore, on the issue of taking the place of financial institutions to provide credit to farmers, enterprises almost have no any difficulty in finance. But if they own are lack of funds or have credit constraints, the possibility to provide trade credit to farmers will decrease.

4.2.2. The degree of dependence upon raw materials from the forestry farmers

For forest products processing enterprises, whether they can get enough raw materials in time is key for normal operation of the enterprises. Enterprises mainly have the following channels to obtain raw materials: (1) directly purchasing from the market; (2) buying from state-owned forestry farm; (3) in the form of contracting, leasing or buying-out to establish industrial base of raw materials; (4) buying through some mountain farmers as middlemen; (5) signing agreement with counties, and then buying from farmers; (6) signing agreement with farmers to acquire through cooperative forestry farms or associations; (7) directly signing agreements with farmers (oral or written); (8) cooperating with farmers on afforestation and obtain raw materials. We found that some of the enterprises with more social capital (mainly in good relationship with government) often have the ability to get raw materials obtained from state-owned forest farms or owned-built bases, especially the overseas-funded enterprises introduced by the local government, who will give them priority to raw material; Some of the large enterprises strength strong often have bases or buy raw materials through middlemen. Therefore, other enterprises will be more dependent on the farmers because of lack of above four kinds of channels to get raw materials and more willing to provide farmers with trade credit so as to promote the cooperation of both sides. The proportion of the number of raw materials from farmers accounting for in all raw materials stands for specific variable.

4.2.3. If there is a third party participating in

A third party refers to the local governments at all levels (county, township and village) or the competent forestry authorities, forestry cooperative economic organizations (cooperative farm or association), acting as the matchmaking helpers, involved in the process of trade. At the same time, the third party also plays the role of the guarantee and the supervisor in the contract relationship between forestry and enterprises, and to a certain extent, can ensure the execution rate of trade credit agreement.

4.2.4. The length of time the trade relationship existing between enterprises and farmers

The longer time the deal between enterprises and farmers taking, the more familiar with the production, status, personal credit of forestry farmers forestry enterprises will be and more willing to provide trade credit and the more willing to establish mutual beneficial relationship. Restricted by survey data, as it cannot exactly reflect the situation of this aspect, this section selects month's enterprises from registered to being surveyed as the length of time trade relationship existing between enterprises and farmers.

4.2.5. The control of the enterprises to implementation of forestry farmers

The control of the enterprises to implementation of forestry farmers refers to the ability that enterprises can control the implementation rate of farmers, stop farmers' behavior of "outside the contract sales" through the effective way, and guarantee the farmers sell enterprise met the requirements of quantity and quality of agricultural products at the appointed time. In this study, it requires that farmers will not sell raw materials agreed upon contract to others. Different from other

agricultural products, despite the fact that farmers have the ownership of the planted trees, but the felling right of forest is not entirely in the hands of the farmers. Therefore, if the enterprise wants to meddle with the cutting right of farmers in a reasonable way, can play a role in preventing imposition of breach of contract.

4.3. The results and discussion of model

According to Logistic regression model, the estimate results are shown in table 2. The value of model of Cox & Snell R^2 and Nagelkerke R^2 respectively is 0.507 and 0.665, indicating that the model fits well.

Table 3. Estimation results of Logistic regression model

	B	S.E.	Wald	df	Sig.	Exp(B)
M	-6.051	9.537	7.111	1	0.003	0
D	2.540	1.315	5.168	1	0.006	12.679
T	4.736	4.487	1.114	1	0.291	113.956
R	0.057	0.048	1.407	1	0.235	1.059
C	1.770	0.911	3.714	1	0.028	5.871
Constant	0.261	4.287	0.104	1	0.851	1.298

Seeing from the statistical results, the coefficient of M (the tension degree of enterprise's funds) is 6.051, and under a 1% significant level, the result is significant which shows that the situation of enterprise's finance is a key factor determining whether the enterprise has the capacity of credit supply. Generally speaking, the enterprises which have enough funds tend to be more willing to and also have the ability to provide farmers with trade credit, verifying the hypothesis of this paper. At the same time, the data of practical survey can also prove this hypothesis: Among the 26 enterprises of adequate and bounteous fund, 79.2% of them provided the trade credit to farmers; nevertheless, among the 32 enterprises of serious shortage of funds, only 34.4% of them provided farmers with trade credit.

The coefficient of D (the degree of dependence upon raw materials from the forestry farmers) is 2.54, and the significance level is high, which shows that the degree of enterprises' dependence upon raw materials from the forestry farmers required raw materials is a key factor determining whether the enterprises to provide trade credit to farmers. The higher level of degree of dependence upon raw materials from the forestry farmers, the more likely the enterprises to provide trade credit. When the enterprises can't obtain raw materials for the production from market, state-owned forest and other channels in time, they will have to establish long-term contract relationship with fixed farmers, and take the advantage of enterprises' adequate capital to achieve a steady supply of raw materials.

The coefficient of T (whether there is a third party) is 4.736, which is not a high level of statistical significance; But from results in the frequency analysis, in 73 sample enterprise, only 14 have established a contractual relation with farmers and provide trade credit to them through the government, or forestry cooperative economic organizations. Without a third party, the proportion of the enterprise to provide trade credit is greatly reduced, but there are still 37.5% of the enterprises have provided the trade credit. The above analysis shows that the participation of a third party is not a key factor influencing the decision-making about credit supply of enterprises, but with a third party to participate in, the possibility of trade credit supply will greatly increase. The existing of coefficient symbol not in conformity with the theory is affected by the sample itself to a great extent. Because in the 59 enterprises without a third party participating in, there are 22 enterprises providing the trade credit to farmers, more than the number of the enterprises with a third party, meanwhile illustrating the power of a third party, forestry cooperation economic organizations, has not played its role.

The coefficient of R (the length of time the trade relationship existing between enterprises and farmers) is 0.057, in consistent with the theoretical hypothesis showing that the longer time the deal between enterprises and farmers taking, the enterprises are more willing to provide trade credit to the farmers, not only the information asymmetry but also the transaction cost being greatly reduced.

However, the coefficient of this variable is very small and the significance level is very low, indicating that the length of time the trade relationship existing between enterprises and farmers has little impact on determining trade credit of enterprises. Through the analysis, a more important reason might have caused the variable not enough accurate: from the questionnaire failing to get the variable data directly, but choosing months between the enterprise was registered and the survey was conducted for instead. Therefore, the enterprise itself has some problems. For example, due to the needs of the development or other objective reasons, the migration of the enterprise may occur, leading to reestablish cooperative relationship with farmers; Or the enterprise did not need or rarely required raw materials from farmers when it was registered at the beginning, only to find that raw materials from farmers are essential when converting the scope of business; The restructuring, merger during the time are also possible. The above can cause registration time and the time we focusing on in this research have a large deviation.

The coefficient of C (the control of the enterprises to implementation of forestry farmers) is 1.770, the significant is general, indicating that the control of the enterprises has a certain effect on whether they offer the trade credit, but not obvious.

5. Main conclusions and policy recommendations

Through the analysis and discussion above econometric model results, we find that enterprise's financial situation (financial strain degree) has obvious influence on whether the enterprise to provide trade credit, in consistent with the hypothesis. At the same time, the degree of dependence upon raw materials from the forestry farmers is a key factor determining whether enterprises to provide trade credit. Therefore, to increase the number of enterprises providing trade credit, which can alleviate the credit constraints and satisfy the capital demand, these two factors must be firstly considered. More enterprises should be encouraged to establish close contract relations with farmers through the various forms of "order agriculture", so as to make the farmers rich and ensure their supply of raw materials. The government and the forestry departments should play a role of "go-between", as the bridge, to support the two parties, and also supervise the implementation of contract. Specific policy recommendations are as follows:

First, strengthen credit support the forestry enterprise, making trade function smoothly. The condition of trade credit is that the enterprise owns enough capital, if the enterprise's capital is in shortage, even if the enterprise is in heavily demand for raw materials, it have no ability to get access to raw materials through the trade credit. Therefore, in order to promote credit support for farmers and enlarge the scale of the supply and coverage, financial institutions should first afford credit support to forestry enterprises, alleviating credit constraints, and then can make credit funds transmit to farmers, realizing the effective connection of the formal financial institutions and informal financial institutions, overcoming many difficulties the farmers facing when they directly achieve loans from the formal financial institutions, and finally really solving the financial difficult problems of farmers.

Second, strengthen the mechanism construction and guarantee the interests of farmers. During the process of carrying out trade credit, limited to the raw material growth cycle, generally loan time lasting for five years, whereas the contract hasn't the agreed purchasing price, only indicating the acquisition in consistent with the price of the market, so the income of farmers is not stable, and the enterprise can realize its purchase in any low price or delayed payment by "public space" leaving in contract in advance. Even if the price is agreed in advance, due to the incomplete contract, when the market price is below the contract price, the enterprise can always find reasons for their opportunism behavior. If farmers want to be against the threat of enterprises' low price, they must first obtain the right to cunt down forest. It follows that in the trade credit contract, a series of performance mechanism (such as a third party participating in) mainly constraint the behavior of farmers, but they are difficult to restrict enterprise's default and their deliberately damages to farmers. Similarly, there are no clear rules about how to deal with the forestry disasters and how to share the losses in the contract. Because enterprise is not responsible for the specific operation management, and forestry insurance has not been carried out, once forestry disasters happen, all the responsibilities are likely to be blamed on farmers. Therefore, in order to increase more enterprises to provide trade credit, building a close relationship with farmers through various forms of "order forestry" to alleviate the credit

constraints should be encouraged. On the one hand, it can make farmers rich; on the other hand, it also can guarantee their own supply of raw materials. And the government and the forestry departments should be as the bridge to support and supervise the two parties [9].

Third, promote the positive development of forestry cooperative economic organizations, making them can link up enterprises and farmers to contribute to the product and credit transaction. Many regions like Fujian province and Zhejiang province, etc, have formed a lot of cooperative farms, forestry associations, but all in small scale and of weak judgement to enterprises. Therefore, in the further reform, the support for these organizations should be strengthened and the way of “enterprise + cooperation organization + farmers” to motivate more farmers to join in should be encouraged [10].

6. Acknowledgements

This work was supported by “the Fundamental Research Funds for the Central Universities”- Beijing Forestry University Technology Innovation Programme team project (No.TD2012-06), Beijing college students' scientific research and entrepreneurial action plan project (121002234)

7. References

- [1] Guo Xiaoming, Liao Zujun, Sun Bin, “Order Farming and Its Mechanism of Operation: An Economic Analysis”, *Agriculture Economic Problems*, no. 11, pp.15-18, 2006.
- [2] Li Zhen, “The Development of the Order Form Agriculture Based on the Trade Credit”, *Journal of South China Agricultural University (Social Sciences)*, no. S1, pp.94-98, 2006.
- [3] Nigel Key, David Runsten, “Contract Farming, Smallholders, and Rural Development in Latin America: The Organization of Agroprocessing Firms and the Scale of Outgrower Production”, *World Development*, vol. 27, no. 2, pp. 381-401, 1999.
- [4] Hugh T. Patrick, “Financial Development and Economic Growth in Underdeveloped Countries”, *Economic Development and Cultural Change*, vol. 14, no. 2, pp. 174-189, 1966.
- [5] Ma Jiujiu, Li Xin, “Forestry Financing Reform and Financial Innovation”, China Renmin University Press, China, 2008.
- [6] Xu Zhe, Tang Beibei, "Study on the Economic Benefit of Forest Eco-Tourism", *IJACT: International Journal of Advancements in Computing Technology*, Vol. 5, No. 1, pp. 352-361, 2013.
- [7] Yang Liu, Xingang Kang, Yanrong Guo, Jinghui Meng, "A Nonlinear-matrix Model for the Prediction of Mixed Uneven-aged Forests Growth with FORTRAN Program in Changbai Mountain, China", *IJACT: International Journal of Advancements in Computing Technology*, Vol. 4, No. 22, pp. 163-172, 2012.
- [8] Tian Zhiwei, Qin Tao, “The Research on China Forestry Financial Support System”, Economic Management Press, China, 2009.
- [9] Li Xinyao, Hou Shuangmei, “Comparison on Order Agricultural Credit Models”, *South Finance*, no.10, pp. 63-65, 2006.
- [10] Yin Liuyan. “Problems and Countermeasures of ‘Order Agriculture + Agricultural Futures + Credit’ Model”, *Journal of financial theory and practice*, no. 11, pp. 83-86, 2008.