

Study on the Development of Forestry Production Service Organization

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Abstract. the protection and utilization of forest resources are one of the important contents of social development. If we want to improve the level of forest management, we must take the development road of production specialization. At present, some operators stand out from forestry production and set up forestry production service organizations, which specialize in forest management. These institutions have their unique management characteristics. In terms of human resources, long-term stable and experienced employees promote production efficiency. In the aspect of production machinery, the rich production equipment has brought about the progress of production technology. In terms of business scope, due to the impact of transaction costs, the business scope is relatively concentrated. In the future, the development of forestry production must follow the scientific management route. Therefore, the government should subsidize the forestry production service organizations, broaden the financing channels of enterprises, and enrich the forestry production system.

Keywords: Forestry development, Production service, Policy suggestion.

1. Introduction

Forest quality is related to the construction of national ecological civilization, the utilization of land resources and the well-being of the people. With the development of China's ecological civilization, forest quality is an important part of the Chinese people's pursuit of a better life. According to the eighth national inventory of forest resources, China's forest coverage rate is 21.63%, far below the global average. The per capita forest area is only 1/4 of the world's per capita forest area, and the per capita forest reserve is only 1/7 of the world's per capita forest area. Forest resources still have a lot of room for improvement in per capita forest quality.

At present, China's forestry development has entered a new stage. First of all, with the increase of non-agricultural employment opportunities, the outflow of rural young and middle-aged labor force is serious, and the rural labor force shows the characteristics of weakening and aging. The ability of rural producers and operators is generally at a low level. With the development of China's secondary and tertiary industries, more and more non-agricultural employment opportunities have emerged, and young workers have left the countryside for urban development. The most direct impact of this kind of labor loss is that the production level of agriculture and forestry is limited. The rural labor force is transferred to the city, and the demographic dividend no longer exists[1]. The imbalance in the labor supply and demand market has led to a rise in labor prices [2]. The problems of difficult and expensive employment have become the bottleneck of forestry production. Secondly, in this context, the weakening labor force releases a signal of rising demand for agricultural production outsourcing services, resulting in the emergence of forestry social services and woodland leasing market. Some scholars believe that forestry social service is to set up some unprofitable organizations to guide farmers' production [3]. However, in reality, there are still forestry production service organizations for forest management. In the process of forestry production, because some farmers have been engaged in agroforestry production for a long time, they have gradually accumulated the ability of forestry production in the process of management, and "stand out" from forestry producers. They began to use the way of circulation to lease land from other families that cannot operate. With the increase of such producers, the woodland rental market has become active. Finally, whether it is the development of the leasing market or the improvement of the level of forestry social services, some producers will gradually accumulate human resources because they have been engaged in forestry production for a long time. This accumulation of

experience makes farmers from the development trend of providing forestry production services for others. This trend induces the birth of organizations specializing in forestry production and service, and the birth of forestry production division market. With the increase of product demand and the development needs of enterprises, production organizations will improve production efficiency by purchasing forestry production machinery, and enterprises begin to accumulate material assets step by step. Driven by the advantages of human resources and production tools, the forestry production service organization team is gradually growing. According to the latest statistics of the Fujian Industrial and Commercial Department, Fujian Province currently provides forestry productive services, including afforestation services, forest tending, and logging services. The problem of a lack of production technology is widespread in the market [4]. On the other hand, the forest service organizations are higher than ordinary forestry producers in terms of production capacity and the level of machinery use. In the future, how to reduce the operating costs of forestry production service organizations and stimulate ordinary farmers to purchase forestry production services, to improve the overall level of forest production and management in China. Whether the professional management model and concept is a way of forestry modernization and sustainable development, these problems need to be evaluated before forestry outsourcing service organizations can be made.

2. Theoretical and Analytical Framework

In the process of operation, forestry production service organizations continue to accumulate manpower and machinery to form a certain degree of asset specificity. It is reflected in forestry production, including the human assets embodied by forest workers, the material assets represented by the level of forestry production machinery, and the geographical assets reflected in the scope of services. This paper measures the management ability and level of forestry production service organization from these three aspects.

First of all, the human assets of forestry outsourcing service providers can be measured by the number of years engaged in forestry production, the nature of work and the level of education. First, the number of years of artificial forest management service production. For individuals, if they are not engaged in forestry-related production, there may be only a few forest production experiences in the long-life cycle. If long-term engaged in production activity, then with the increase of production experience to form skills precipitation, at this time to engage in other work opportunity cost becomes larger, at this time the value of forestry production is the greatest. Second, the ratio of part-time employees to full-time employees. Because of the particularity of forestry production, afforestation is mainly concentrated in spring, while weeding and fertilization can occur in spring and autumn, and the seasonal effect is obvious. In the off-season, companies often choose to lay off workers because they are unable to get profits, a phenomenon that has led to the emergence of part-time and full-time staff in forestry service organizations. Among them, part-time workers may engage in other production activities in the non-production stage. However, if employees are engaged in forestry-related production work, they can still accumulate some human assets. Third, the level of education. Employees with a high level of education have a stronger ability to solve problems independently and are more likely to receive training in forestry production. Therefore, the level of education is also an important asset in forestry production. To sum up, human assets are affected and measured by many factors, and special attention should be paid to the evaluation of forest production service organization.

Also, Different geographical conditions, different tree species management, different production links, different management scale, need to use different technology and equipment to match. So far, forestry production is still a production activity that requires high labor input, and the degree of mechanical substitution is still not high. With the progress of science and technology, more and more forestry production machinery has been developed. Among them, the production link most affected by technological progress is cutting. Due to the development and application of cutting tools, the difficulty of cutting has been reduced. However, the purchase of cutting machinery requires more money, and for small farmers, the frequency of machinery used is very low, and the

effectiveness of purchasing forestry production machinery is not great. Usually, only larger production organizations will use forestry production machinery. At this time, machinery is a double-edged sword for production service providers, on the one hand, machinery improves production efficiency, on the other hand, the purchase of machinery will make producers need to invest most of the money. To make full use of the machinery, it is necessary to find the demand. Therefore, material assets improve production efficiency and increase operating costs at the same time.

Finally, forestry service organizations mainly focus on urban greening business. Because government projects often clearly require that the bidder is an enterprise legal person registered by the industrial and commercial department, and obtain the relevant business qualifications. This requires forestry service organizations to have a relatively fixed office location, which has also become the "stronghold" of enterprises. The production services of enterprises are often carried out around this base camp, and the employees are mainly local workers. According to the transaction cost theory, when the business scope of an enterprise is larger, the transaction cost in the production process may become higher because of the cost of information collection or communication. Therefore, forestry production service organizations often need to find a balance between operating costs and income to determine the scope of enterprise services. This service scope is also a geographical asset for enterprises, in which enterprises can bring reputation through excellent production services, and beyond this geographical scope, it may bring excess costs.

Based on the logical framework of "market division of labor—accumulation of production assets—the emergence of forestry production service organizations", this paper evaluates and analyzes the assets of forestry production service organizations, and tries to gain insight into the asset characteristics of forestry production service organizations. to speed up the division of forestry production and better promote the development of forestry productive service organizations, the corresponding countermeasures and suggestions are put forward.

3. The Present Situation of the Development of Forestry Productive Service Organizations

3.1 Feature of Human Resource

Firstly, forest service organizations have stable employees. Among the 82 forestry service organizations surveyed, the average number of employees of forestry service organizations is 27, which is divided into internal work and fieldwork, and the average length of service of the staff is 5.6 years. This means that most of the employees are skilled workers with experience in forestry production. According to the forestry production cycle, forestry service personnel can easily accumulate multiple afforestation experience by providing production services to different demanders, which will improve forestry production efficiency. Secondly, 34% of forestry service organizations are full-time employees and 66% are part-time employees. Relatively stable employees form a tacit understanding with each other, reducing the time and energy cost of running-in service in production links, thus improving the overall strength of the team. In the face of the reality of high cost and high risk of changing jobs, the possibility of workers changing jobs in forestry service organizations is small, which ensures the stability of workers. Through the continuous accumulation of human capital through "learning through work", the service level of afforestation is gradually improved, and finally, the production efficiency is promoted.

The average age of the staff of the forestry service organization is 50 years old. Compared with the elderly left behind in rural areas, this age is relatively young. In the survey, it is found that 96% of the forestry service organizations assess the forestry production skills of their employees before they enter the job, and require their employees to have relevant experience in forestry production and management, and a small number of forestry production service organizations will train their staff and unify production standards. In reality, the educational level of the employees of forestry service organizations is generally low, but their average annual income can reach 40,000 Yuan, which means that workers can get about twice the disposable income of the local people only when

they work in the suitable forest months. To keep employees, enterprises often give additional financial incentives to employees who have been employed for a long time, and the skills that have been accumulated by employees of forestry service organizations have become skills that they are difficult to give up. After receiving skill assessment and training, workers with afforestation experience have consolidated and improved their production level through actual production, promoted the progress of afforestation service organization, and promoted the development of specialized forestry production.

3.2 Character of Machinery Resources

At present, forestry production machinery has not been fully promoted in forestry production service organizations, and forestry production service machinery is mainly used in land preparation, afforestation, tending, cutting and other production links. Among them, the number of machineries used for tending accounts for the largest proportion of the total machinery, followed by the cutting link. The role of mechanized production in forestry production service is obvious. With the purchase of machinery by forestry production service organizations, more extensive mechanical applications will be formed. The use of machinery requires workers' experience and skills, and special personnel is required to operate it, and the operator enjoys a higher salary. For casual workers and farmers, the production level may limit the progress of production technology because it is difficult to bear the early investment in the purchase of machinery. In the survey sample, the forestry service organizations with registered capital of fewer than 100000 Yuan accounted for 10% of the total sample, 23% of the total registered capital was 10-1 million Yuan, and 67% of the total registered capital was more than 1 million Yuan. 81% of the cost of the service organization is labor cost, and the proportion of the mechanical cost is not high. 68% of the forestry service organizations own machinery. the average total value of machinery in forestry service organizations is 45000 Yuan, and the average number of machinery is 13 pieces. It can be seen that forestry production service enterprises have accumulated production machinery assets, and these assets have been widely used. In the future, with the development of production machinery and the increasing demand for forest outsourcing services, there is still a lot of room to accumulate mechanical assets, which will bring about production efficiency and technological progress

3.3 Scope of Business Services

From the perspective of service scope, 77% of the forestry service organizations mainly operate in the county, 18% in the city, and 7% in the province. 26% of the forestry service organizations consider increasing the scope of services, while the remaining 74% do not consider increasing the scope of services to meet the current situation and find it difficult to expand their business. If the enterprise expands the service scope, it will increase the transportation and accommodation cost of the staff, which is the biggest problem that the forestry service organization is unwilling to expand the service area. A survey of enterprises that are unwilling to provide cross-district services found that they will choose to provide cross-district services only if they have to increase their fees by at least 10%. At present, forestry production service is mainly based on tending demand, followed by afforestation and logging. The proportion of forestry production service organizations that look for customers through traditional methods such as government announcements, independent bids and acquaintances is as high as 97%. 70% of forestry production service organizations will give long-term customer concessions; only 3% of forestry production service organizations are more successful in brand promotion, pay attention to maintaining customer relations, and mainly rely on new customers to visit independently and attract repeat customers to obtain customers.

4. Countermeasures and Suggestions for the Development of Forestry Production and Service Organizations

First, subsidies promote the development of forestry productive service organizations. Forestry production and management itself have a positive externality. This positive externality usually

needs to be carried out in the form of subsidies. After receiving the subsidy, some ordinary farmers will not use the subsidy completely for forestry production. Therefore, subsidizing productive service organizations may be the direction of forestry subsidies in the future. The government can choose to directly subsidize the enterprises engaged in the forestry production business, reduce the price of farmers' outsourcing, and promote farmers to choose forestry production service organizations with a higher degree of specialization. This subsidy to forestry production service organizations will bring two benefits. On the one hand, ensure that 100% subsidies are used in the process of forest management; on the other hand, forestry production service organizations can be promoted to replace the individual production of farmers and improve the overall level of forest management in society.

Second, expand financial credit support. At present, the production cost of forestry production service organizations is used to hire workers, and relatively little money is used to buy machinery, which is due to the high cost of purchasing production machinery. A high-level forestry production service provider must be equipped with advanced forestry production equipment. However, at present, only some production institutions will spend a small part of their annual operating profits on the purchase of new production machinery. In the future, the policy should increase the supply of credit for the purchase of forestry machinery, encourage service organizations to purchase more forestry machinery according to market demand, and improve forestry production efficiency.

Third, improve the forestry production service system. The government plays an important role in the forestry production service system. The government needs to stimulate market demand and build an information exchange platform for forestry products and services. Through information sharing, alleviate the problem of asymmetry in the dissemination of information [5]. We will broaden the channels for forestry service organizations to attract business and actively encourage production organizations to provide cross-district services. Formulate standardized production standards, strictly require forestry service organizations, establish enterprise exit mechanisms, and improve the overall level of forestry production service organizations in the market.

References

- [1]. Cai F. Demographic Transition, demographic dividend, and Lewis turning point in China. *Economic Research Journal*.2010,45(4):4-13.
- [2]. Gai Q E, Zhu X, Shi Q H. Labor's migration and Chinese agricultural production. *China Economic Quarterly* .2014,13(3):1147-1170.
- [3]. Stocks. B. J, Martell. D. L. Forest fire management expenditures in Canada: 1970–2013. *The Forestry Chronicle*. 2016,93(3):298-306.
- [4]. Kong F B, Liao W M. Collective woodland fragmentation, farmers' input and output of forest product--base on 2420 households from 9 provinces(region)of China. *Journal of Agroforestry Economics and Management*.2014,13(1):64-73.
- [5]. Karlan D S. Social connections and group banking. *The Economic Journal*. 2007, 117 (517) :52-84.