THE SALES INCOME ANALYSIS OF AGRICULTURAL COOPERATIVES

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ABSTRACT

This paper aim is to define impact factor of cooperative sales income and recommend ways to increase cooperative income. The hypotheses were: the Government subsidy on raw material is key income factor of cooperative total income and cooperative characteristic influence to the their income. The economic survey conducted to 176 rural cooperatives and research methods are by inductive, deductive, comparative analysis and regression analysis. The 40% of Mongolian cooperatives are agricultural cooperatives and half of them cooperatives with members 201-300. The Government subsidy on raw material procurement is main advantage of agricultural cooperatives and lack of financial source and climate and nature condition are main disadvantage of cooperatives. In the research result, cooperative activities are unsustain, however Mongolian Government approved and implemented programs and projects for cooperative development. The sales income of cooperatives depends on income from animal raw materials, mainly Government subsidy on wool and cashmere procurement by econometric analyses of using Stata program. The cooperative working age (experience) significant to the sales income, also. With diversification cooperative activities in the future and Government support on multi-income generation for cooperatives for cooperative development.

KEY WORDS: cooperative, cooperative member, rural cooperative, sales income, sales analysis

INTRODUCTION

Since emerging from communist control in 1991, Mongolia has developed a market economy and undertaken legal reforms to encourage the development of the private sector. In 1995, Mongolia enacted its first cooperative law to regulate the newly developed cooperative sector [1]. The cooperative development is significant to the income generation of rural herders through expanding production output and job creation by using low cost in short term in case of low populated, small market scale and large area of Mongolia. The cooperative is important to the rural development, socio-economic responsibility of rural people. However there are many cooperatives were established in rural area by The Mongolian Government policy and programs and support of donor organizations, cooperatives face to the poor competitive advantage and lack of financial and human resource still now. The cooperative activities in rural area are in initial phase of their development. In some case, some cooperative activities are limited to the procurement of animal raw material. Their key activities are procurement of animal raw material and distribute Government subsidy to herders for procured raw material. Therefore there is need to define influence factor to the cooperative sales activity and recommend ways to increase sales income and future development.

RESEARCH METHOD

The secondary data conducted on Mongolian Statistical official data and primary data was collected from 176 cooperatives of western provinces of Mongolia. The secondary data were collected from Ministry of Food and Agriculture, National Statistical office and National Association of Mongolian Agricultural Cooperative. The research paper method is based on economic-econometric analyses: inductive, deductive, comparative analysis and regression analysis of impact to cooperative sales income by using Stata program. The econometric analysis conducted to the multi-regression analysis based on methodology of Nor Radziah [7].

RESULT AND DISCUSSION

This paper shows main economic indicators of cooperatives which are used economic analyses, firstly. Second, regression analysis of cooperative sales income deepens to current economic, socio and legal environment of cooperatives.

In 2014, there were registered 3200 cooperatives and 40 % of them agricultural, fishery and forestry cooperatives, 26% of them whole sale and retail sale cooperatives, 10-12% of them financial service and processing activities [4]. Data from the National Statistical Office provides types of cooperatives by various activities.

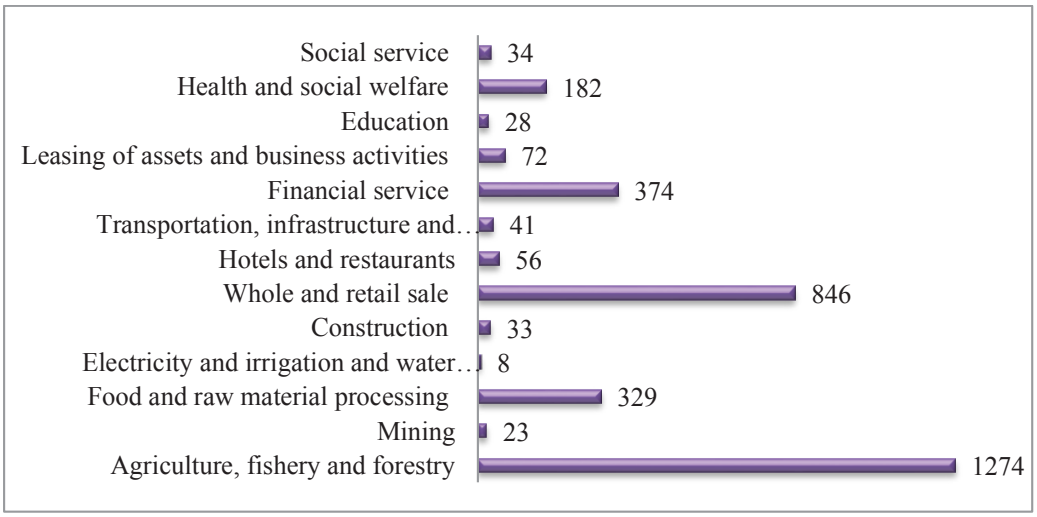

Figure 1. Types of cooperatives (by various activities)

In Mongolia cooperatives with 200 thousand members exit in 21 provinces and they created 60 thousand jobs, nowadays. [6] The primary and middle cooperatives are working at province and cities level and National Agricultural Cooperative Committee works at the National level. Mongolian cooperative is total sale - 15 billion tugrugs, total dividend – 500 million tugrugs, total taxpaying – 3.0 billion tugrugs [2]. 50% of total cooperatives are with members 201 – 300, 20% of total cooperatives are with members 51 – 100 and cooperatives with members below 50, 301 – 400, and above 401 are 10% in each [5].

The study focused cooperative financial source and 60% of total cooperatives income is from members' contributed fund, 30% of them from members' tax and 10% of them from other financial source. 80% of total cooperative were created resource fund and 20% of them could not create resource fund. But, 30% of cooperatives with resource fund think that their resource fund is not sufficient for future development and risk aversion.

The strength of cooperatives is Government subsidy on raw material procurement and good knowledge of members about agricultural sector. The weakness of cooperatives is lack of financial source and produce production under climate and nature condition. Members' non equal participation to the cooperative activities is common in almost all cooperative. Consequently cooperatives should pay attention to not loose current members, increase number of members and continuously and sustainable activities in the future.

The econometric analysis conducted to the multi-regression analysis based on methodology of Nor

Radziah [7] and the following formulas were developed for Mongolian cooperative specific condition by own researcher.

Basic model:

$Sales_i = Size_i + \alpha_1 Age_i + \alpha_2 Number\_mem + \alpha_3 Raw\_m + \alpha_4 Employee + e$

Model of cooperative characteristic:

$Sales_i = Size_i + \alpha_1 Age_i + \alpha_2 Number\_mem + \alpha_3 Raw\_m + \alpha_4 Employee + + \alpha_5 Edu + \alpha_6 Temp\_w + e$

The analyses used Stata program for estimation and results of regression analyses are in below tables.

Table 1

Basic and Cooperative characteristic model of sales income

Dependent variable: Sales income

	Basic model	Model of cooperative characteristic
Size	.07309399	.08398352
Number of workers	2308743.1	1944312.8
Number of members	8144.0023	7770.2031
Raw material procurement	10784539**	10897690**
Working years (age)	638673.02*	619435.89*
Education level of cooperative head		1051543.5
Number of temporary workers		-203054.98
Number of observation	176	176
R-squared	0.72	0.75
Chi2	0.23	0.23

Note: * p<.05; ** p<.01; *** p<.001

The raw material procurement is significant at the 0.01 level to the sales income and working years (experience) is significant at the 0.05 level in Basic model. In model of cooperative characteristic, raw material procurement is significant at the 0.01 level to the sales income and working years (experience) is significant at the 0.05 level, also.

We also estimated two more different models: Model of impact of Government subsidy and Model of cooperative business types by using dummy variables.

Model of impact of Government subsidy:

$Sales_i = Size_i + \alpha_1 Age_i + \alpha_2 Number\_mem + \alpha_3 Raw\_m + \alpha_4 Employee + + b_1 Subsidy_i + b_2 Loan_i + e$

Model of cooperative business types:

$Sales_i = Size_i + \alpha_1 Age_i + \alpha_2 Number\_mem + \alpha_3 Raw\_m + \alpha_4 Employee + c_1 sme_i + c_2 gazar\_t_i + c_3 other_i + e$

Table 2

Impact of Government subsidy and Business types to the cooperative sales

Dependent variable: Sales income

	Model of the Impact of Government subsidy	Model of cooperative business types	Combined model
Size	.07542939	.0509283	.05371918
Number of workers	1959154.8	148296.86	231038.2
Number of members	8468.0053	6771.2609	9235.9579
Raw material procurement	10909733**	20327072*	20468545*
Working years (age)	668347.79*	486885.74	521791.85
Education level of cooperative head			12015.317
Number of temporary workers			235960.61
Government subsidy	.0126787*		.00478908*
Loan	.03686227		.05285926

Small and medium enterprises		10316899	10270888
Agriculture		146659.04	142109.14
Number of observation	176	176	176
R-squared	0.83	0.85	0.81
Chi2	0.23	0.23	0.23

Note: * p<.05; ** p<.01; *** p<.001

In the result of regression analyses, raw material procurement is significant at the 0.01 level to the sales income and working years (experience) and Government subsidy are significant at the 0.05 level in the model of the Impact of Government subsidy. The raw material procurement is significant at the 0.05 level to the sales income. The cooperative business type is not significant to the sales income. In finally, we estimated combined model by all variables including dummy variables. The raw material procurement and Government subsidy are significant at the 0.05 level to the sales income of cooperatives.

CONCLUSION

Cooperatives belong to their members whose shares are the basic capital and Government subsidy, but they need to seek additional resources without threatening their cooperative character. With diversification cooperative activities in the future and Government support on multi-income generation for cooperatives. There is need to responsive legislation and policy, a sound investment in training and education and some capital assistance cooperatives will continue to change and strengthen the cooperatives in which they operate.

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