Jejak Vol 13 (2) (2020): 1-8 DOI: https://doi.org/10.15294/jejak.v14i1.25420

JEJAK

Journal of Economics and Policy

http://journal.unnes.ac.id/nju/index.php/jejak

Strategy to Improve The Competitiveness of Cooperatives

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Permalink/DOI: https://doi.org/10.15294/jejak.v14i1.25420

Received: December 2020; Accepted: January 2021; Published: March 2021

Abstract

This research purposes is to analyze cooperative's strategy to improve its competitiveness based on information technology utilization. This research employs a quantitative descriptive approach, analysis on cooperative competitiveness with Policy Analysis Matrix (PAM) in consideration of input and output. Cooperative's business development strategy employs an analytic hierarchy process (AHP). The analysis is conducted on active cooperatives with open data system (ODS) in Central Java Province. 64.82% of all cooperatives have utilized information technology in their business operation and 35.18% of all cooperatives have not utilized information technology in their business operation; Result of the Policy Analysis Matrix (PAM) using the Domestic Resources Cost Ratio (DRC) = 0.240 This Condition shows that the cooperatives business is efficient and has comparative advatage. Private Cost Ratio (PCR) = 0.229, means the cooperative has been able to use its domestic use the actual price and has competitive advantage. Cooperative has comparative advantage and competitive advantage competitiveness. The results of AHP analysis with five development criteria show that the information technology criterion is the most prioritized criterion with weight value of 0.365; the capital criterion's weight value is 0.218; the human resource criterion's weight value is 0.195; the network criterion's weight value is 0.164, and the marketing criterion's weight value is 0.058. The cooperative competitiveness standard does not include export variable, thus further research needs to be conducted with different measuring tool from that of this research.

Key words : Competitiveness, Information Technology, Cooperatives

How to Cite: Rusdarti, R., & Sakitri, W. (2021). Strategy to Improve The Competitiveness of Cooperatives. JEJAK: Jurnal Ekonomi dan Kebijakan, 14(1). doi:https://doi.org/10.15294/jejak.v14i1.25420

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p-ISSN 1979-715X
e-ISSN 2460-5123

INTRODUCTION

A Cooperative is a medium to develop economic democracy and collect potential development through society members, and perform economic activities to raise its members welfare. Ropke (2000) explains that cooperatives in developing countries generally do not have opportunity to grow gradually and enhance their efficiency to equalize to private competitors and other governmental economic institutions. Ropke also states that cooperative from the beginning of its existence has faced strong international and national competitors, moreover in this global trade era, in which product competition will be stricter, thus local products are not only required to have comparative advantage, but also competitive advantage.

The number of cooperatives in Central Java Province keeps increasing, with additional 233 units or increasing for 0.83% since 2015 to 28,460 units. From this number, 81.78% or 23,275 cooperative units are active, while the remaining 5,185 units are inactive. (Central Java Province Cooperative and SME Agency, 2017).

Based on this fact, we may state that the number of cooperatives in Central Java Province increases, but not in balance and not in line with their quality, efficiency and competitiveness. In this global/free trade era, some researches show that cooperative competitiveness is low and inefficient. The reason of cooperative's low competitiveness is that most of cooperative's human resources (HRs) in Central Java Province have not utilized information technology well and optimally. This indicates that cooperatives in Central Java have low competitiveness and inefficiently operate their business and non-optimally utilize technology.

According to some issues described above, solutions are needed to solve the problems. One of the solutions is to determine competitiveness according to the Policy Analysis Matrix (PAM) theory, which is an analysis tool used to find out the economic efficiency, and amount of incentive or intervention in various business activities in overall and systematically. In this research, PAM arranges a matrix, which contains information on cost, income, and profit of cooperative business. The information on cost, income, and profit provides indicators on cooperative business competitiveness, which are comparative advantage and competitive advantage. Further expectation, the cooperative sector may significantly contribute to the economic growth of Central Java Province through identification of competitiveness determinants, information technology utilization and business efficiency.

The competitiveness and utilization of information technology (IT) issues need to be immediately solved by the government in this globalization and free trade era. All this time, cooperative development is concentrated only on cooperative internal aspects, while stricter external aspects like competitiveness has not often been performed, particularly based on information technology or business efficiency. From the results of previous research conducted by Rusdarti (2015) entitled "*The Strategies of Tofu and Fermented Soybean Cake Cooperation in Facing China-Asean Free Trade*", it is found that a strategy which may appropriately be applied by *Primkopti* in facing CAFTA free trade is market penetration and development of products or services strategy by *Primkopti* through SWOT matrix.

Competitiveness is a relatively complex concept. There is no single indicator which may be used to measure competitiveness, which is in fact hardly measured and is complex (Markovics, 2005). Furthermore, Delgado, Porter, Ketels & Stern, (2012) state that

Competitiveness has become a central feature of the economic policy debate, as it should when it is understood as underpinning prosperity. But the competitiveness debate, both in policy and academia, remains hobbled by confusion about what the term competitiveness actually means. Economic competitiveness improvement becomes increasingly relevant when the economic order worldwide gets open and directs at market economic system. Competitiveness is one of criteria to determine a success and achievement of a better purpose by a state in improving income and economic growth. Competitiveness is identified with productivity issues, by viewing the output level generated for each input used. Porter (1995) states that a concept of competitiveness which may be applied at national level is "productivity" which is defined as an output value generated by a labor. A state's high competitiveness will be quite helpful for the competitiveness of products in such state, but the competitiveness of a product is also determined by a number of factors, both internal, such as exchange rate, interest rate which influences production costs and productivity, and internal such as the structure of global market.

According to Pearson et al. (2005), competitive advantage is the ability to supply goods and services with a time, place and form as expected by consumers. The goods and services are marketed in domestic and international markets at a price equal to or better than competitor's price. Competitive advantage is a private indicator of efficiency of a commodity based on the market price of such commodity or a value of money currently prevailing in a state.

The competitiveness concept in this research is one related to cooperative in its business management. A cooperative business will be deemed as having competitiveness if it has competitive and comparative advantage covering productivity and efficiency. The competitiveness of a commodity may be measured through two approaches: generated profit rate and business efficiency. Generated profit rate may be seen from two perspectives: private profit and social profit.

Utilization of information technology and communication by cooperative in running its business is a necessity in effort to serve its members and for business efficiency and to improve its competitiveness, with quicker information acquisition and unlimited utilization. Utilization of information technology (IT) depends on the human resources (HRs) of the cooperative. The higher the quality of Cooperative human resources in utilizing IT, the higher the cooperative competitiveness level is.

The purpose of information technology is to solve problems, open creativity, and improve effectiveness and efficiency in performing work. Therefore, we may state that the necessity to solve problems, open people's creativity and efficiency in performing work is the reason or reference of creation of information technology. The existence of information technology makes people's work easier and more efficient.

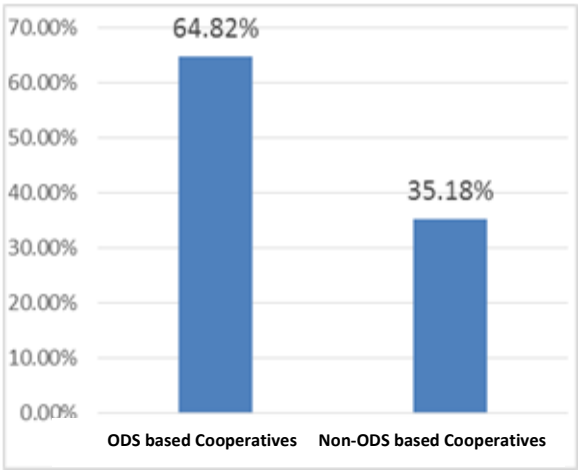
METHOD

This research employs a quantitative descriptive approach and uses secondary and primary sources of data. The analysis is conducted with a descriptive analysis, analytic hierarchy process (AHP), Policy Analysis Matrix (PAM), and the indicator of competitiveness of commodity is: Private Cost Ratio (PCR), showing utilization of domestic resources to generate industry's added value. If PCR < 1, an industry has competitive advantage and if PCR > 1, it does not have competitive advantage.

Social profit and comparative advantage obtain value from Domestic Resource Cost (DRC), that if DRC < 1, an industry has comparative advantage and if DRC > 1, an industry does not have comparative advantage.

RESULTS AND DISCUSSION

The results of descriptive analysis shows descriptively that, in regard to utilization of information technology variable, many cooperatives have operated their business based on information technology (IT) or many of them have used the open data system (ODS), as given below.



Source: Processed data, 2018

Figure 1. Description of Open Data System of Cooperatives in Central Java, 2018

The 14,953 cooperatives, which have operated their businesses based on information technology (IT), are ODS based, or 64.82% and 35.18% of cooperatives are non-ODS based.

The cooperative business development strategy in Central Java is formulated using an Analytic Hierarchy Process (AHP) method. The analysis result shows that the information technology aspect (weight value 0.365) is the most important criterion to pay attention to in developing cooperatives in Central Java. The next aspect of cooperative development is capital aspect (weight value 0.218), human resource aspect (weight value 0.195), network aspect (weight value 0.164) and, finally, marketing aspect (weight value 0.058). The inconsistency ratio value is 0.09 < 0.1 (maximum limit), which means that the analysis results are acceptable. The aspects designated in cooperative development in Central Java and their weight values are given in the following table:

Table 1. Cooperative Development Criteria in Central Java

No	Program	Weight Value	Description
1	Based on information technology	0.365	Inconsistency Ratio = 0.09
2	Based on capital	0.218	
3	Based on human resource	0.195	
4	Based on network	0.164	
5	Based on marketing	0.058	

Source: Primary data, processed data (2018)

Table 1 above shows that the most prioritized aspect in developing cooperative is information technology. Information technology is important in cooperative development, with regard to its utilization. With input on open data system (ODS), a cooperative will be known not only in Central Java, but also throughout Indonesia and even in the world since it is internet based. This is also a demand in this digital or millennial era. The second priority of cooperative development in Central Java is capital aspect. Capital aspect is important in operating cooperative business, which cannot be separated from a business. With adequate capital and good financial management, operating a cooperative business will be easier and, thus, the cooperative

business will continuously grows. The third priority of cooperative development in Central Java is human resource (HR) aspect. HR is important in relation to running cooperative business. An appropriate development may be performed by improving quality and professional human resources in managing cooperative, which is continuous improvement of quality HRs for cooperative's administrators and members. With quality HRs, a cooperative business will continuously grow in achieving its purpose, particularly the welfare of cooperative's members and the society in general. The fourth aspect to pay attention to in cooperative development is cooperative network. To operate well and smoothly, a cooperative must create built a mutually beneficial network with various parties. The fifth priority in cooperative development in Central Java is marketing aspect. Marketing cannot be separated from cooperative business development, without setting aside its members interest.

The overall analysis results of strategy alternatives for cooperative development uses the Analytic Hierarchy Process. The strategy alternatives of the five aspects of criteria are information technology, capital, human resource, network and marketing, sorted ascending pursuant to the results of AHP, as given in detail in the table 2 below.

Table 2. Alternative Order of Cooperative Development Strategy

No	Program Criteria	Weight Value	Explanation
1	Cooperative business access	0.118	Information Technology Aspect
2	Financing access	0.109	Capital Aspect
3	Business partnership with secondary cooperative	0.096	Marketing Aspect
4	Similar cooperative development	0.084	Network Aspect
5	Training to civilize entrepreneurship	0.083	HR Aspect
6	Cooperation with various parties	0.080	Information Technology Aspect
7	Business partnership with small enterprise	0.067	Marketing Aspect
8	Network technical assistance	0.065	Network Aspect
9	Technical education and training	0.065	HR Aspect
10	Network training to improve business management	0.052	Network Aspect
11	Education and training to improve business management	0.052	HR Aspect
12	Incentive for active cooperative	0.048	Capital Aspect
13	Fund assistance for cooperative	0.042	Capital Aspect
14	Information technology training	0.040	Information Technology Aspect
15	Marketing activity facilities	0.028	Marketing Aspect
Overall Inconsistency Index = 0.04			

Source: Primary data, processed data (2018)

From all strategy alternatives in cooperative development determined using AHP analysis, the 5 best alternatives are chosen: (1), cooperative business access, which is an alternative in information technology aspect with a priority percentage of 11.8%; Priority (2), financing access, which is an alternative in capital aspect with a priority percentage of 10.9%; Priority (3), business partnership access with secondary cooperative, which is an alternative in marketing aspect, with a priority percentage of 9.6%; Priority (4), similar cooperative development, which is an alternative in network aspect, with a priority percentage of 8.4%; Priority (5), training to civilize entrepreneurship, which is an alternative in HR aspect, with a priority percentage of 8.3%; Priority (6), cooperation access with various parties, which an alternative in information technology aspect, with a priority percentage of 8.0; and, Priority (7), business partnership with small enterprises, which is an alternative in marketing aspect, with a priority percentage of 6.7%. The overall inconsistency index value is 0.04 < 0.1 (maximum limit), which means that the analysis results are acceptable. The development strategies to perform in effort to improve cooperative competitiveness are: first priority, cooperative business access, which is of the information technology aspect; second priority, financing aspect, which is of the capital aspect. Business capital is important for cooperative. With ease of capital acquisition from external source with low costs, a cooperative will grow its business beneficially under increasingly stricter business competition.

The cooperative competitiveness with *Policy Analysis Matrix* (PAM) in Central Java in 2018 (January-May) can be viewed in table 3 below.

Table 3. Results of Analysis on the Competitiveness of Cooperative in Central Java using PAM in Millions Rupiahs

Component	Income	Costs		Profit
		Tradable Input	Non-Tradable Input	
Private	141,769,393	70,975,072.43	16,181,595	54,621,725.57
Social	141,769,393	71,994,268.91	16,181,595	53.593.529.09
Divergence	0	-1,019,196.48	0	1,019,196.48

Source: Primary data, processed data (2018)

The competitiveness of cooperatives in Central Java is examined based on the following comparative and competitive advantage

$$DRC = \frac{Costs\ of\ Social\ Non-Tradable\ Input}{Social\ Income - Costs\ of\ Social\ Tradable\ Input}$$

$$= \frac{16181595}{141769393 - 71.994.268,91}$$

$$= 0.240$$

Comparative advantage may be analyzed using the Domestic Resources Cost Ratio (DRC) indicator based on the Domestic Resources Cost value calculated from components in PAM table

Cooperative businesses in Central Java have DRC value < 1, which is 0.240. This condition shows that the cooperative businesses re efficient and have comparative advantage. The lower the DRC value, the cooperative businesses will have higher comparative advantage.

$$PCR = \frac{Costs\ of\ Private\ Non-Tradable\ Input}{Private\ Income - Costs\ of\ Private\ Tradable\ Input}$$

$$= \frac{16.181.595}{141769393 - 70.975.072,43}$$

$$= 0.229$$

Competitive advantage may be analyzed using the Private Cost Ratio (PCR) indicator calculated from components in PAM table.

The cooperative businesses in Central Java have PCR < 1, which is 0.229. This means that the cooperatives are able to use their domestic products at actual price and have competitive advantage.

According to the results of competitiveness analysis using Policy Analysis Matrix (PAM), the cooperatives in Central Java have comparative advantage and competitive advantage competitiveness. The cooperatives in Central Java are able to survive under a condition whether there is or there is no Government policy.

The results of competitiveness analysis state that the cooperative businesses in Central Java have comparative advantage and competitive advantage competitiveness. With regards to comparative advantage, the cooperative businesses have used their domestic resources efficiently. While with regard to competitive advantage, the cooperative businesses are able to use their domestic products at actual price and have competitive advantage. The DRC value is higher than the PCR value, which means that the cooperatives in Central Java have higher comparative advantage than competitive advantage, and this shows the role of Government policy in protecting the cooperative businesses. The competitiveness analysis with PAM in this research is limited and weak since it does not use export variable in its calculation. All inputs used are domestic, since not all cooperatives in Central Java in their businesses have export business unit or have their marketing reached international market. Therefore, with regard to competitive advantage, the cooperatives in Central Java and Indonesia have not reached international market.

CONCLUSION

Information technology has been utilized by cooperatives in Central Java, with 14,953 cooperatives of 64.82% of the total cooperatives have utilized information technology in their operation and 8,118 cooperatives or 35.18% of the total cooperatives have not utilized information technology in their operation.

According to PAM analysis, cooperative has comparative advantage and competitive advantage competitiveness. Comparative advantage shows that a cooperative has efficiently used its domestic resources, and competitive advantage shows that a cooperative is able to use its domestic resources at existing actual price throughout its business operation without government policy.

The results of AHP analysis with five development criteria of cooperatives in Central Java show that: The information technology criterion is the most prioritized criterion, with weight value of 0.365; The second criterion is capital criterion, with weight value of 0.218; The third criterion is human resource criterion, with weight value of 0.195; The fourth criterion is network criterion, with weight value of 0.164; The fifth criterion is marketing criterion, with weight value of 0.058. The research results state that the priority is information technology and cooperative business access, thus the development strategy performed as a solution is the development of cooperative business aspects and cooperation with various parties.

Information technology utilization should be optimized for cooperative, considering that 35.18% of active cooperatives are not based on information technology. The cooperative competitiveness standard used with the PAM analysis in this research has weakness, since it does not use export variable to measure the competitiveness. Therefore, further research is needed with different measuring tool from that of this research.

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