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The internal market of dairy cooperatives: Chances and challenges of global-market

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Abstract

This study aims to analyze the Internal Market of Dairy Cooperative and to analyze its implications toward the competitiveness to face the integration of ASEAN Market. This survey was conducted in three dairy cooperatives, KPBS Pangalengan, KPSBU Lembang, and KPS Bogor. The sampling technique used in this research was Stratified Random Sampling (STRS). Research results showed that the internal supporting market of cooperative has positive impacts on the competitiveness of Dairy Cooperative in the external market to face global market integration.

Keywords: The Internal Market of Cooperative, Dairy Cooperatives, Global Market, Business.

El mercado interior de las cooperativas lecheras: Una oportunidad y desafíos del mercado mundial

Resumen

Este estudio tiene como objetivo analizar el mercado interior de la cooperativa de lácteos y analizar sus implicaciones para la competitividad para enfrentar la integración del mercado de la ASEAN. Esta encuesta se realizó en tres cooperativas lecheras: KPBS Pangalengan, KPSBU Lembang y KPS Bogor. La técnica de muestreo utilizada en esta investigación fue el muestreo aleatorio estratificado (STRS). Los resultados de la investigación mostraron que el mercado de soporte interno de la cooperativa tiene impactos positivos en la competitividad de la cooperativa de lácteos en el mercado externo para enfrentar la integración del mercado global.

Palabras clave: Mercado interior de cooperativas, cooperativas lácteas, Mercado Global, Negocios.

1. INTRODUCTION

The global economy tends to fluctuate, which is now going to decreasing economy. It has a negative impact on the economic sectors in some countries in the world, both in developed countries and developing countries including Indonesia. The negative impacts will spread to the more strategic aspects, such as pressure on the aspects of politic, social, culture and any other crises of confidence in the ruling of authorities. Economic downtown founded in some developing countries and developed countries are important to be a very valuable lesson in continuing national economic development in the future. Facing economic instability, it needs to develop a new collective awareness that the management of the national economy that is based on the pursuit of economic growth and does not promote the equalization will not exist in a long term. New collective awareness is directed to balance on national

economic management between growth and equality, as well as entrenched on the basis of the national economy, especially on cooperative and small business units (Monroe, 1990; Porter, 1994).

Relating to the strengthening effects of the global economic environment, and the strong competition among the economic sectors so that the thought, study, and policies to improve the vitality of micro cooperatives and small businesses that need attention continue to be more capable to contribute to the national economic resilience. Regarding various aspects that can be done, one of which is the study of the relationship between the business members and cooperatives in the face of external conditions. The study on cooperative in term of microeconomic is relatively limited (Wirasmita, 2000). The study on cooperative has been devoted to impressing many aspects that merely the ideology vitality and normative principles only, it is not effective. So it is still not felt contributing significantly to the advancement of the theory of micro cooperatives, especially with regard to analysis endurance (closeness), the relationship between members of the cooperative enterprise business is still open to question. This condition causes a lot of the emergence of the phenomenon of more easily than the case of the emergence of a new long-standing cooperative to survive and even thrive Not even a little bit of effort this cooperation to a standstill (Subyakto, 1988; Abbasi & Heirani, 2016). Due to the lack of attention on this aspect has led to limited knowledge of microeconomic aspects of the cooperative, especially in relation to maintaining the robustness good cooperation relationship between members and members of the cooperative enterprise. It is consequently very limited cooperative effect felt by members and management. Thus, a solution that can be taken in maintaining the quality

and viability of the cooperative organization is also very limited (Salvatore, 1996; Silberberg, 1990; Yousefi et al. 2016).

Furthermore, according to Wirasasmita (2000), the lack of studies in this field due to the cooperative prevailing theory up to now ignore the internal market, which is transactions that occur among members of the cooperative enterprise. The reason is because of the focus of attention of cooperative studies aimed at the co-operative enterprise, not the Cooperative Society, namely to the members and the cooperative enterprise as a whole. Besides, the internal market did not exist, because the task was considered cooperative members sell products, or buy the purposes of members.

Study of the internal market in this cooperative is taken from the model proposed by Wirasasmita. According to Wirasasmita (1992), one of the types of cooperatives that meet the assumptions of the model is a marketing cooperative and it is called a single cooperative. This type of cooperative conduct business as a marketer output member (buy the output member or purchase of the internal market selling to external markets). Marketing cooperative is also heavily involved in the policy; Pricing, promoting and processing (Hudiyanto, 2002). Marketing cooperative performs the interaction between the business unit members who perform production activities with cooperative companies that perform marketing activities. Thus, it creates an internal market mechanism in the cooperative. Internal Market model application can basically be carried out on all marketing cooperatives, including Dairy Cooperative. The reason for choosing a study on Dairy Cooperative because in addition to meet the assumptions of the model Wirasasmita also added Dairy Cooperative is a

type of cooperative that handles one of the important strategic commodity in society. Commodities milk, in addition to a perishable commodity, together with unfavourable market conditions have led farmers are always in a weak position. Therefore, to the position of farmers can be more powerful and prosperous, the strength of the relationship between business units with the members of the cooperative enterprise can be further enhanced and more mutually beneficial needs to get the more in-depth study. Thus both empirically and theoretically cooperative effect concerning relations with the members of the cooperative enterprise can run more realistic, so expect cooperatives as economic enterprises can have formidable durability in the face of global markets and are not left behind by its members (Sekaran, 2000, Ameen et al. 2018).

Nowadays, there are more than 22 dairy cooperatives in West Java with total dairy production up to 239.000 tons a year. This amount is equivalent to 41.38 per cent of national dairy production (GKSI, 2014). Currently, the need for fresh dairy in Indonesia is 3.8 million tons with domestic supply of 798.000 tons (21%). While the remaining of 3 million tons (79%) is still to be imported in the form Skim Milk Powder, Anhydrous Milk Fat, and Butter Milk Powder from around the world like Australia, New Zealand, United State of America, and European Union (Skunmun et al., 1999).

It has been acknowledged that the level of Indonesia dairy consumption is relatively low compared to the average consumption of ASEAN countries. The dairy consumption in Indonesia is 12,10 kg/per capita/year, Malaysia, 36,2 kg, Myanmar 26,7 kg, Thailand, 22,2 kg, and Philippine 17,8 kg/capita/year (Permana, 2015). Based on the data, the

potential of the Indonesia dairy market relatively can be grown. Therefore, if domestic dairy cooperative can be strengthened, so that the effort to increase the need for national dairy can be increased. This can be done by empowering the integrity in the shape of networking among cooperatives (cooperatives networking). It can build the power of a huge internal market. This is in line with the need of dairy consumption in every country which is also getting bigger. Hence, the large import of national dairy and the need of the global market can be decreased, thus global independence dairy milk can be improved.

2. LITERATURE REVIEW

2.1 The Goals of Cooperative Business Enterprise

Based on the type and model assumptions existing companies have different objectives. Type of capitalist companies (neo-classical models) has been assumed to be driven on the runway and the achievement of maximum profit. There are also companies that choose only to gain normal. According to Stigler (Arsyad, 1991), in relation to the objectives of the company, filed a principle known as survivorship principle (safety principles). The principle was explained that companies will survive in a long time; it seems those with the highest profit-making. The units of commercial enterprises that are not oriented to profit will be frozen out of the world of business by other companies that may be looking for maximum profit with a more efficient way. Meanwhile, According to Baumol, the main objective of the company is to maximize the value of its sales growth rate in the long term (maximization of sales). In addition, the

model assumes Marris the company's goal is to maximize the rate of growth that is balanced between the growth rates of demand for goods produced by the growth rate of the capital stock of the company (Arief, 1996). Nevertheless, assumptions about the purpose of the above company still get many criticisms from many sides.

A lot of of-of experts' cooperatives have founded that cooperative companies are not motivated to achieve maximum profit, but rather the maximization of service to members. Therefore, measures taken in the cooperative must be in accordance with the principles of cooperatives, including in terms of pricing policies. Pricing policy should be determined such that a cooperative company does not lose its identity (Burhan & Ismail, 1988). As such cooperative efforts are not to be driven upon a foundation of maximum profit, but rather anchored in the cooperative ideals that harmony between the promotions of members of the cooperative enterprise growth. Because of the growth of the cooperative, it is a prerequisite for the achievement of the welfare of members. In this context Ropke (2000) distinguishes five pricing rules for cooperatives; (a) maximization of profit ($MR = MC$), (b) maximization of output ($P = AC = AR$), (c) minimizing the average cost (average cost), (d) the competitive equilibrium ($P = MC$), and (e) maximization SHU / dividend (patronage refund).

Fehl & Zorcher in Dulfer (1994) says there are two principles, namely the MCPP (pricing principle based on marginal cost), and ACPP (pricing principle based on average cost). According to Ohm (Ropke, 2000), the behaviour of cooperative companies are often called in the literature is the policy of the cooperative; (a) maximization of output (AC

= AR), (b) the minimization of the average cost ($AC = MC$), and (c) a competitive solution ($MC = AR$). At cooperative suppliers (supply cooperatives) according to Schmiesing (1989), the possibility of pricing policies to achieve the goal of the Cooperative is; maximize net revenue ($MC = MR$), (b) minimizing the net price paid members ($MC = ATC$), (c) operate on the basis of cost or break-even (Operate at cost). As for the marketing cooperatives is; (a) maximizing the net price ($MNR = ANR$), (b) maximize net revenues as private companies ($MNR = MIC$), and (c), operate at cost ($ANR = S$) (Schmiesing, 1989).

2.2 The Construction Models of the Internal Market Dairy Cooperative

Model internal market within the cooperative has not been widely discussed by experts of the cooperative. Models that can be found in the literature a new cooperative obtained from Wirasasmita. The model is a transformation of the model of Professor Hanel (1989) on the concept of cooperative relations. Wirasasmita models are focused on applications in cooperative marketing. Benefits understand the internal market in cooperatives, are expected to carefully define the various policies matching between business goals with the objective of cooperative enterprises, for example in terms of determining the pricing policy that allows benefits (cooperative effect) to the members and the cooperatives business enterprise growth (Wirasasmita, 2000). According to Wirasasmita (1992), to understand the internal market in the cooperatives, the approach used is Multi-plant industry, namely cooperatives (cooperative society) are considered as a collection of companies or

factories. These conditions are relevant to the marketing cooperative because the marketing cooperative there are two companies (double nature), that is the individual member companies and the company jointly owned cooperatives as members (Hanel in Dulfer, 1994). Cooperatives are owned by the company as well as the cooperative service users (Abrahamsen, 1976), or That the members are the co owner's as well as the clients or customers ... (Hanel, 1989).

To determine whether the rules have been implemented by the cooperative, it is necessary Cooperative Objective Function model. Objective Function Model Cooperative (FOK) used in this study refers to the model formulated by Wirasasmita (1992; 2000) as follows:

$$\text{Maximizing: } R = f(X)$$

$$\text{Constraints: } F = (R - C) > F'$$

Where, R = Revenue, X = Output, $R = f(X)$ reception function, F = Income Cooperative, C = Cost, and $F' =$ Profit growth Cooperative minimum guarantee.

Because $\lambda > 0$ then

$$\frac{\partial C}{\partial X} > \frac{\partial R}{\partial X} \quad \text{where} \quad \frac{\partial C}{\partial X} = MC ,$$

$$\frac{\partial R}{\partial X} = MR$$

, then: $MC > MR$ (Cooperative rule)

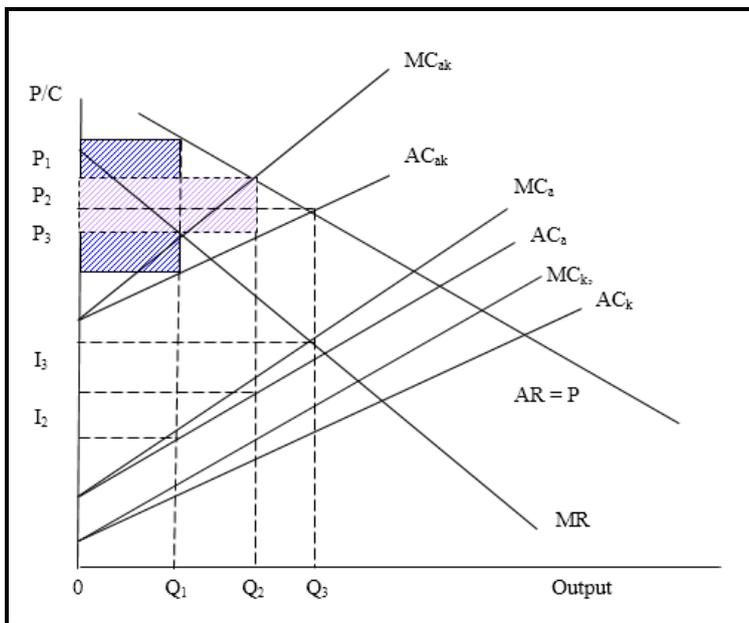


Figure 1: Implication of Theoretical Models of the Internal Market of Cooperative
 Source: Wirasmita (2000)

Figure 1 above shows the AR curve, it displays an average reception, together with the demand faced by the cooperative, MR is the acceptance of marginal, MC is the marginal cost of the combined members (MC) at the company's cost of cooperatives (MC), and AC is the average cost of combined members (AC) with an average cost companies operative (AC). The balance between the growth of cooperative enterprise with the welfare of members can be seen from the pricing policy chosen when $MC = AR$. The cut-off point at the time $MC_{ak} = AR$ is as a rule Cooperative

($MC > MR$). In these conditions the yield rate of the purchase price to members of the OI with OQ purchase amount greater than when using the cooperative rules to maximize profits ($MC = MR$), at a purchase price to members of the OI with the purchase amount of OQ. Rule of balance can be examined based on the average profit of the cooperative are relatively small, amounting IP, instead of IP, but the benefits (cooperative effect) to the members of the second, and the additional purchase of the output member of QQ. To estimate SHU necessary in order to maintain the level of growth and promotion of members, the rules conducted by estimating the total revenue curve (TR) and total cost curve (TC). For example, can be estimated with $TC = a + bX + cX$ and curves $TR = XP = aX - bX$. Briefly, Construction Model Internal Market Dairy Cooperative can be expressed as follows:

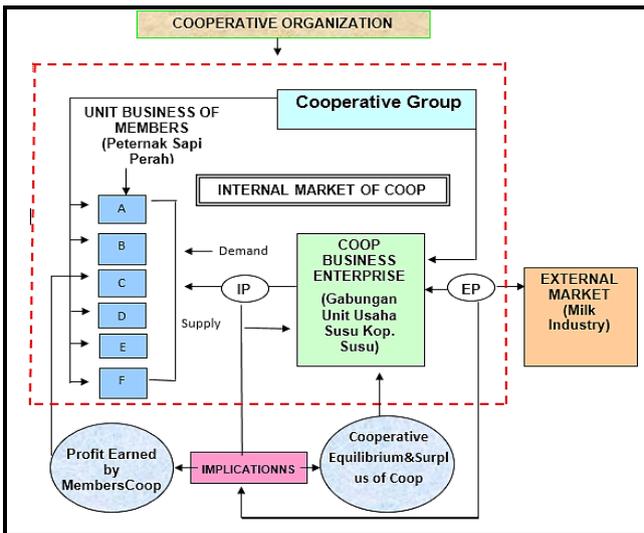


Figure 2: Mechanism of the Internal Market in Cooperative Dairy
 Description: IP = Internal Price, EP = External Price, SHU = Surplus of Cooperatives, and KUA = Profit Earned by Members.

Model internal market in a cooperative according to Wirasasmitta (1992) the necessary assumptions. The assumptions can be developed in accordance with the case to be observed. It is necessary to separate models for each typical Cooperative. Special marketing cooperatives assumptions are expressed as follows: (1) A member of a producer, (2) Each member produces one type of product, (3) The activities of member companies with enterprise Cooperative is complementary, and (4) There are no transactions between members of the company other than a cooperative. For the purposes of this study, the assumption has been modified in accordance with the object of study chosen, as follows: (i) members produce as one commodity (milk); (ii) the Cooperatives Business Enterprise buying milk from its members (internal market) and market to the Milk Processing Industry (external market); (iii) members only sell milk to the cooperative (no sale of milk by members out of the cooperative enterprises); (iv) acceptance and SHU cooperative business enterprise outside fresh milk marketing activities are not incorporated into the model; (v) acceptance of members and member benefits beyond fresh milk production activities are not incorporated into the model; (vi) Cost of milk marketing cooperative burden on the cooperative business enterprise, while the milk production costs borne by member businesses. The surplus of Cooperative (SHU) herein is obtained from the pure transaction (buying and selling) between members of the company's business cooperative. While the advantages created by the company and there is a permanent member of the so-called profit. The existence of the internal market in a cooperative can be identified with the demand curve, which is an internal price line, and curve bid is the marginal cost curve of the combined efforts of members. Cooperative Business Enterprises is Gab. It is Business Units of Dairy Cooperative. Keep in mind that a business unit of Dairy

Cooperatives, there are some units, such as USP, Cooperative Stores, Feed, Hospitality, Agrotourism, consumption etc related to the interests of its members. Business units other than the milk trading system is not calculated (not included) into the analysis model (Yamane, 1979).

3. MATERIALS AND METHODS

This study used a survey method. The survey method used to collect information on the part of the population to represent the population in question (Singarimbun & Effendi, 1995). This research was conducted in three dairy cooperatives that specialize business (single-purpose cooperative) in the field of dairy in West Java province, namely; KPBS in Pangalengan, KPSBU in Lembang, and KPS in Bogor. The unit of analysis in this study is; (1) business cooperative members (business member dairy farmers) and (2) the cooperative enterprise (cooperative enterprise).

Table 3: Definitions Operational Variable(s)

No.	Variable(s)	Definitions	Measurement
1	The carrying capacity of the internal market	The total integration cooperative members in selling the milk production to the members of the cooperative enterprise to be marketed to the external market (Dairy Processing Industry = IPS) The quantity of milk sold to cooperatives	The quantity of milk that is sold to cooperatives
2	Internal Market	Transaction member business (selling milk) with member companies	Rupiah
3	External Market	Transaction cooperative business (selling milk) with the Dairy Processing Industry (IPS)	Rupiah
4	Milk production (Q)	Fresh milk (not milk packaging/cup/pasteurized milk) during the year	liter

5	Internal Price (HI)	The purchase price of the average milk from a member for a year	rupiah /litre
6	External price (HE)	The selling price of the average milk external markets for a year	rupiah /litre
7	Cost of Cooperative Business Enterprise (TC _{kop})	All costs incurred for the milk marketing cooperative company merged with the total cost of production members (TC _{kop} = TC _{agt} + TC _{pms}) for a year	Rupiah
8	Marketing costs (TC _{pms})	all costs incurred by the company for the Cooperative marketing activities during the year	Rupiah
9	Cost of member businesses (TC _{agt})	All costs incurred by the members for the production of milk for a year	Rupiah
10	The surplus of Cooperative (SHU)	Income pure cooperative company, which is obtained from the milk marketing activities less all expenses for a year. <i>SHU Gross: SHU Brt = TR header Brt - TC header. SHU Netto: SHU Net = Net TR letterhead - TC pms</i>	Rupiah
11	Cooperative Earned by Members (KUA)	Income purely individual members derived from the sale of milk deducting all costs of milk production for a year (Agt at = TR - TC ago)	Rupiah

Given the number of business units on the third member of the cooperative relatively very much and can also be stratified by ownership business scale dairy cows, the sampling technique used in this research technique Stratified Random Sampling. To meet the engineering str members have been grouped into three strata, namely; (a) farmers business degree (S-1) (<4 mice), (b) the farmer effort two strata (S-2) (4-6 tails), and (c) breeders attempt three strata (S-3) (> 6 tail). Results of sampling techniques were obtained str total sample for all strata are; KPBS Pangalengan 97 business units, KPSBU Lembang 98 business units and KPS Bogor 73 business units. The number of samples is for the three cooperatives of 268 business units.

The research data were collected through; (1) Interviews (2) questionnaire, and (3) Documentation. Sources of data obtained from; (a) Cooperative. The company, covering the data; the number of requests from members of milk cooperatives, milk sales to external markets, marketing costs, and the performance of cooperatives in connection with the marketing of milk, (b) Member Business Unit, covering the data; the amount of production and the cost of milk production at the level of members, as well as the characteristics of respondents. The model analysis was done; (1) Cost Function Regression, (2) Regression Revenue Function, (3) Regression Total Sales and SHU and (4) Testing Objective Function Cooperative (FOK).

A. Cost Function Approach

Function Cost of Milk Production Enterprises Association Members;

$$C_{gab\ agt} = b_0 + b^1 Q^1 + b^2 Q^2 + b^3 Q^3$$

Function Cost of Milk Production and Marketing Association Members Enterprises Dairy Cooperative third (KPBS + KPSBU + PPP);

$$C_{gab\ kop} = b_0 + b^1 Q^1 + b^2 Q^2 + b^3 Q^3$$

B. Revenue Function Approach

Total Member Revenue

$$TR_{gab\ agt} = aQ^1 - bQ^2$$

Total Revenue Function of Dairy

Cooperatives:

$$TR_{kop} = aQ_{gabkop} - bQ_{gabkop}$$

C. Objective Function Approach

Cooperative (FOK):

$$\text{Maximize: } R = f(X)$$

$$\text{Constraints: } F = (R - C) > F'$$

$$\frac{\partial C}{\partial X} > \frac{\partial R}{\partial X} \quad \text{where, } \frac{\partial C}{\partial X} = MC, \quad \frac{\partial R}{\partial X} = MR, \quad \text{then:}$$

$$MC > MR \text{ (Cooperative rules)}$$

Regression total sales and SHU to determine which ensures the growth of cooperative enterprises and promotion of member businesses.

The equation is: $S = aF + bX$

4. RESULT AND DISCUSSIONS

4.1 Conditions of Dairy Cooperative in West Java

The number of dairy cooperatives is still active in West Java until the end of 2014 to reach 30 cooperative ideas. Of the 30 cooperatives that only 3 single cooperative nature of the business, while 27 is the dairy cooperatives. Over the last five years, the growth of members on KPBS decline reached 10.43% (-10.43%); While on KPSBU and KPS increased respectively by 18.58% and 7.94%. Although the KPBS decrease but an increase in the number of members reached 85.59% gain SHU. KPSBU 19.60%, while the KPS decrease reached 48.95% (-48.95). The number of members' active farmers who produce milk, the population of lactation, milk production and sales volumes of milk can be seen in the following table:

Table 2. Data Dairy Cooperative

No	Name of Cooperative	Number of Active Farmers Milk Production	Population of Cows	Milk Production Average price / Lt / Monthly	Selling Average Milk / Lt / Month	
					IPS	Consumer
1	KPBS Pangalengan	3,396	8,475	2,952,761	2,194,103	758,658
2	KPSBU Lembang	3,287	6,238	2,590,982	2,460,340	130,642
3	KPS Bogor	265	880	310,205	285,300	24,905

Source: KPBS, KPSBU, KPS (2013)

The development of the price level of external (HE) on average, internal prices (HI) on average, the net price (HB) and the quantity of production can be seen in the following table:

Table 3: The level of Price Externally, Internal Price, Net Price and actual production quantities in the third Cooperative

No	Name of Cooperative	Output (Liter)	HE	HI	HB
1.	KPBS	557,903	3,711.08	3,463.04	248.04
2.	KPSBU	550,042	3,667.91	3,434.05	233.86
3.	KPS	451,057	3,711.46	3,491.90	219.56
Total Average		1,551,965	- 3,696.82	- 3,462.99	- 233.82

Note: HE = Price Externally, HI = Internal Price (purchase price of milk of member businesses), HB = Net Price (difference HE by HI)

4.2 Milk Production and Marketing System

Fresh milk production activity carried out at the farmer level. While the cooperative company acts as a marketer by processing the first being sterilized milk. Milk Treatment unit (MT) belong to the cooperative. Once sterilized and then marketed to Milk Processing Industry (IPS) and the other milk. The large volume of milk production depends on the number of lactating cows owned by the members. Stages and processes of production of fresh milk at the farmer level, include; (1) Preparation of the cage and land, (2) Procurement of seedlings, (3) Provision of feed (concentrate and forage), (4) Wed (insemination), (5) Maintenance of health, (6) Extortion milk (done 2 times a day, morning and evening in lactation) and (7) Bringing fresh milk that has been filled into the milk cans to the milk collection or TPK. While the production process at the

level of the cooperative enterprise in the form of the processing of fresh milk that has not been sterilized sterile. Special cold milk which has been sterilized to be marketed, the process includes several stages; (1) Screening of fresh milk, (2) Analysis of the quality (accept or reject), (3) Shelter and filtering II, (4) Refrigeration, (5) Temporary storage in a storage tank with a temperature of 40 C before being filled into tank cars for marketed to IPS. Equipment used in the processing of cold milk at the processing unit (MT) include; (1) Roller Conveyor, (2) Scales, (3) Temporary shelters (4) Plate cooler (Plate Cooler), (5) Tank balance, (6) Plate Heat Exchanger, (7) homogenizer, (8) Centrifugal Pump (9) Storage tank milk (Milk Storage Tank), and (10) Cooling Unit. Each of these milk cooperatives has established a good business partnership relationship with some IPS, both in Bandung and surrounding, other cities in West Java and Jakarta. In addition to a relationship with IPS, cooperatives also maintain good relations with distributors and agents milk, cottage industries, and consumers directly. The biggest buyer of fresh milk from dairy cooperatives is IPS. IPS that in a relationship as a cooperative venture partner are: (1) PT. Foremost Indonesia, (2) PT. Friesche Vlag Indonesia (3) PT. Ultra Jaya Milk, (4) PT. Indomilk, (5) PT. Indolakto. (6) PT. East Jakarta, (7) PT. Sulanjana Cup, (8) PT. West Jakarta, (9) PT. Agent Cirebon, (10) Hopyes Datifah, (11) PT. Diamond, (12) PT. Fajar Taurus, and (13) PT. Inasentra.

4.3 Cost Of Milk Production and Marketing Cost

Components of fixed costs on KPBS amounted to 29.20%, and variable costs amounted to 70.80%. The greatest percentage of fixed costs

is the cost of cattle, reaching an average price of Rp 6 million to Rp 6.5 million per head (lactating cows productive/ready to be milked or too roughly 1-2 years of production). While the components of the variable costs incurred for the largest percentage of feed costs (46.09%), consisting of; feed concentrate 30.06%, 16.03% and the forage feed. Followed by labour costs reached 24.05%, and livestock health cost of 0.66%. At KPSBU component of fixed costs amounted to 28.49%, and 71.51% variable costs. While the PPP, the fixed cost component amounted to 27.73%, and variable cost components amounted to 72.27%. In detail on each cooperative there is little difference, but not too big. However, these differences can impact the different levels of the purchase price of milk from members.

Marketing costs here are all costs incurred by the cooperative enterprise in order to process the milk purchased from members and sell it to the IPS. Expenses are related to the following activities: (1) transport of milk, either from members (TPK) to units of milk processing (MT), as well as the transport of milk to the IPS, (2) Processing of milk on the unit MT, (3) Workers involved in marketing section plus a few percent to the cost of the common organization of cooperatives (Annex; Table 2 and Table 3). Based on existing data on dairy cooperatives, the details of these costs have been grouped into fixed costs and variable costs. Included in the fixed cost component includes; (1) Salaries of employees, (2) Welfare (3) Maintenance and machine inventory, (4) Maintenance of buildings, (5) Insurance and (6) Depreciation Assets. While classified as a component of variable costs include costs; (1) Transportation of milk, (2) Equipment laboratory and the use of chemicals, (3) Electricity, fuel, and water, (4) Operations & samples, (5) administration tool (ATK), (6) Cost of

communication, (7) levies and taxes, (8) Travel agencies and (9) Cost of other variables. The amount of the expenditure of these costs on each Cooperative slightly vary. The percentage of variable costs incurred to achieve a value of 60.98%. The rest 39.02% is for a fixed fee. The largest expenditure in the variable cost component is the cost of transporting milk to reach a value of 26.08%; While, the largest expenditure in the fixed cost component is for the salaries of employees by 23, 13%. Note that, in the processing of milk at the dairy cooperative shrinkage occurs. Mainly due to; (a) destruction of milk, (b) losses in transportation, both shrinkage of The Cooperative Services (TPK) to unit MT or MT to shrinkage of IPS, and (c) milk is not sold out (Fakhruddiana & Utomo, 2019).

5. DISCUSSION

The study results illustrate that: (1) policies that can help price promotion member businesses and also can encourage the growth of cooperative enterprise cooperative evident when the marginal cost is greater than marginal reception cooperative. After the estimation proves that the policy price below the price level when the maximum SHU that would benefit members and also can encourage the growth of the cooperative enterprise. (2) The implications of pricing policies in accordance with the rules of the cooperative to cooperative equilibrium, KUA, and the acquisition of SHU proven to provide the ideal balance for the acquisition of KUA and SHU for business promotion and growth of the members of the cooperative enterprise. For the estimation results illustrate that the pricing policy in accordance with the rules of co-operatives can promote member businesses and also can encourage the

growth of the cooperative enterprise. This condition can be seen that the level HI at the time of maximum SHU conditions provide KUA relatively small, while HI under conditions of maximum SHU give a better impact on the acquisition of KUA (Abdulrahman et al., 2018). (3) No irregularities in the practice of pricing policy of price levels in accordance with the rules of the cooperative. This is because the results of the test Objective Function Cooperative (FOK), by inserting the quantity of the actual production of the 268 respondents of 1,551,965 litres into the equation MC header> MR letterhead found MC = MR Kop = 5858.81679 and 1651.93693, Turns MC header> MR letterhead. Thus the pricing policy in practice does not deviate from the price policy in accordance with the rules of the Cooperative. (4) The milk cooperatives in West Java already implementing pricing policies in accordance with the rules of the cooperative. This can be proved by testing the Cooperative objective function well for the conditions of production quantity and the estimation results for the actual quantity conditions. More clearly can be seen on the calculation result table and the following picture (Mat et al., 2018):

Table 4. Price Policy Dairy Cooperative

Cooper ative Goals & Policy	Produ ction	TR cop (milyar)	EP	TCcop	ACc op	SHU Brutto	MRc op	MCc op
SHU Maxim ize MC cop = MR cop	710.6 19	1.179.97 6.954	1659 ,08	888.21 7.422	1249 ,92	290.75 9.532	1,65 5.82	1,65 5.19

Competitif									
Equilibrium	711.507	1.179.296.800	1657,46	889.687.805	1250,43	289.608.995	1,655.82	1,657.46	
MC cop = AR cop									
Service at Cost	1.131.978	1.875.031.810	1656,42	1.875.031.810	1656,42	0	1,653.88	3,246.69	
AC cop = AR cop									
Cooperative Goals	Producti on	TR cop (milyar)	EP	TC cop	AC cop	SHU Brutto	MR cop	MC cop	
Maximize	SHU cop = MR cop	710.619	1.179.976.954	1659,08	888.217.422	1249,92	290.759.32	1655,82	1655,19
Competitif	MC cop = AR cop	711.507	1.179.296.800	1657,46	889.687.805	1250,43	289.608.95	1655,82	1657,46
Equilibrium	AC cop = AR cop	1.131.978	1.875.031.810	1656,42	1.875.031.810	1656,42	0	1653,88	3246,69
Service at Cost	SHU								
AC cop = AR cop	Maximize MC cop = MR cop								
Cooperative Goals & Policy	Production	TR agt	IP	TC agt	AC agt	MC agt	KUA		
Maximize MC cop = MR cop	710.619	950.138.330	1337,04	783.884.035	1103,10	1449,46	166.254.295		

Competitif							
Equilibrium MC cop = AR cop Service at Cost AC cop = AR cop	711.50 7	951.323.2 47	1337,05	784.872.0 94	1103,11	1451,50	166.451.153
at Cost AC cop = AR cop	1.131.9 78	1.513.519 .611	1337,06	1.248.207 .268	1102,68	2899,12	265.312.343

Note: Estimates based on the average price of fresh milk for the last five years (2009-2013).

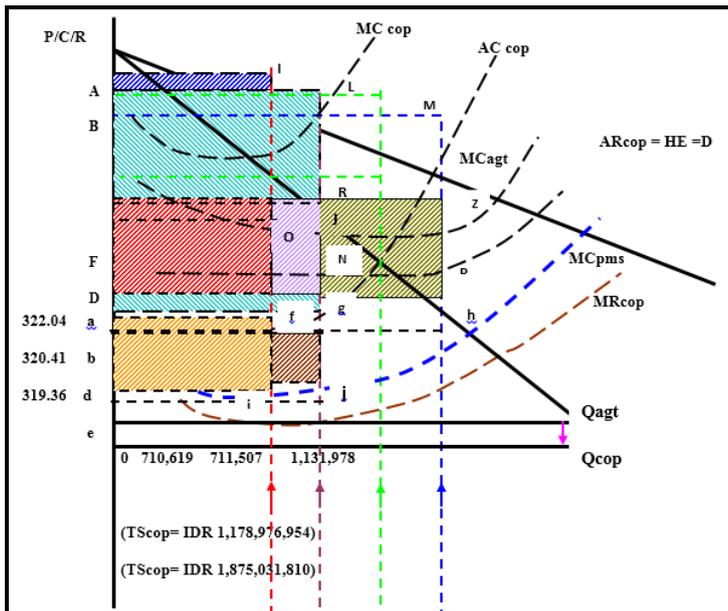


Figure 3: Condition Equilibrium of Dairy Cooperative in West Java.
 Note: TScop is Total Sale (Total of Cooperative Selling)

6. CONCLUSIONS AND RECOMMENDATION

6.1. Conclusions

Having analyzed based on assumptions and analysis model described above is obtained some conclusions. (i) The pricing policy that meets the rules Cooperative evident when choosing a policy when the MC header > MR letterhead. This policy consists of; (a) policy for a competitive solution (MC kop = AR letterhead) and (b) the policy as a service institution (AC kop = AR letterhead). (ii) The implications of pricing policies in accordance with the rules of the Cooperative proven to provide balance in the Cooperative relatively ideal, both for the company's growth as well as for the promotion of cooperative efforts of members. Pricing policy to achieve competitive solutions has implications for the acquisition of SHU is ideal because it is still able to obtain SHU above normal for growth. While the pricing policy which aims to make cooperative enterprise as a service agency has implications for the acquisition of KUA better. (iii) Nothing found irregularities in the practice of pricing policy of pricing policy in accordance with the rules of the Cooperative. Thus, earlier findings say that the pricing policy on cooperatives often deviate from the rules of the Cooperative is not true. (iv) The test results of the objective function models Cooperative (FOK) found that a single dairy cooperative effort in West Java has been implementing pricing policies in accordance with the rules of the Cooperative. (v) A picture of the carrying capacity of a strong internal market and dairy cooperatives do not deviate from the rules and principles of the cooperative dairy cooperative in West Java are believed to be

competitive in the face of external market integration of the ASEAN-2015. Thus the welfare of the members can be improved.

6.2 Recommendations

It is time for the management of Dairy Cooperatives in West Java reinforces the carrying capacity of the internal market as a basis for more effective cooperation and mutual benefit in the face of external markets, namely the integration of the ASEAN-2015. Dairy Cooperative in West Java needs to be initiated to-toward the establishment of a jointly-owned dairy factory. This is because, in addition to the increasing demand for dairy products, such as milk powder (full cream milk), sweetened condensed milk (milk condense), milk pasteurization, milk bread, milk candy and various other dairy products. So that the added value of milk for the benefit of cooperative enterprises and well-being of members can be improved.

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APPENDIXES

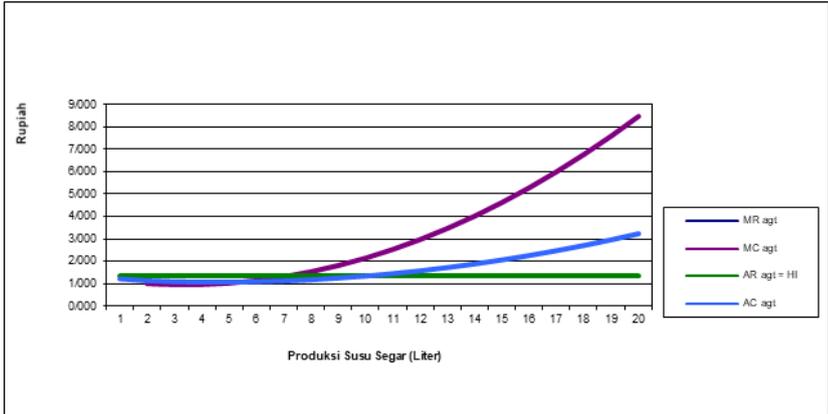


Figure 1 : MR Agt, MC Agt, AC Agt and HI

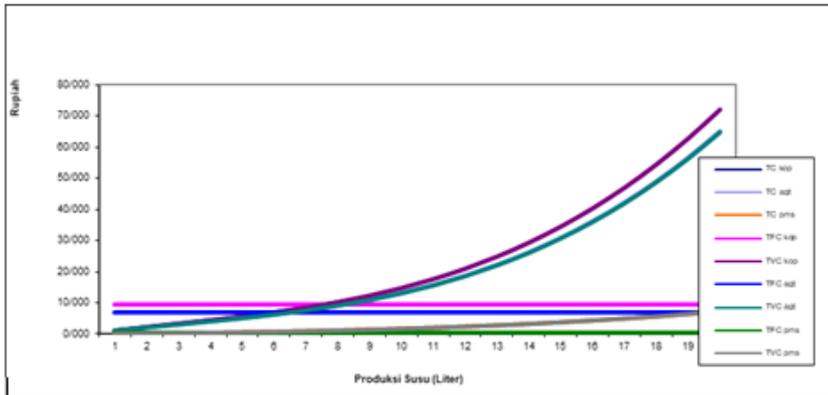


Figure2 : TCUnit Members dan Cooperative

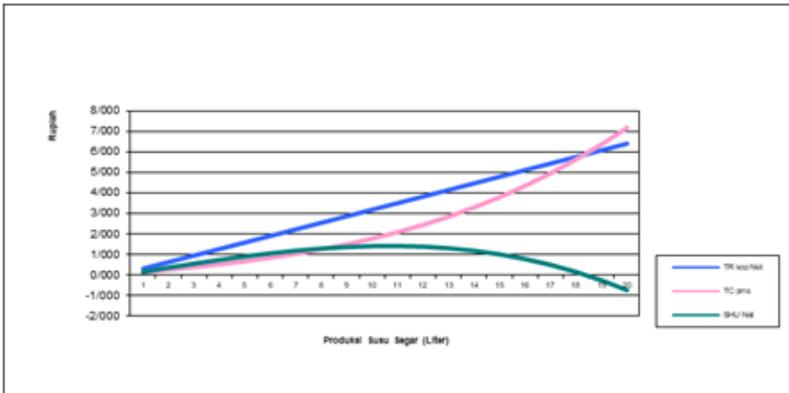


Figure 4: TR Coop Netto, TC Pms, and SHU Netto

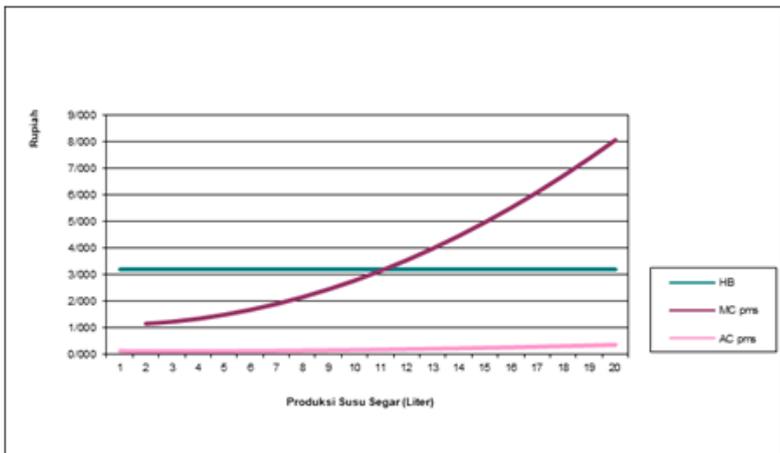


Figure 5: Nett Price (HB), MC Marketing , and AC Marketing

Table 1: TR, ARand AR agt and Coop

Q (Sepuluh ribu liter)	TR cop Bruto	TR cop Bruto	TR cop	AR cop	AR agt	HB (Net Price)	MR cop	MR agt
	(Ribu Rupiah)			(Rupiah)				
10	16587,9 70	3191,06 2	13396, 908	1658, 797	1339, 691	319,106	-	-
20	33169,7 40	6384,54 8	26785, 192	1658, 487	1339, 260	319,227	1658, 177	1338, 828
30	49745,3 10	9580,45 8	40164, 852	1658, 177	1338, 828	319,349	1657, 557	1337, 966
40	66314,6 80	12778,7 92	53535, 888	1657, 867	1338, 397	319,470	1656, 937	1337, 104
50	82877,8 50	15979,5 50	66898, 300	1657, 557	1337, 966	319,591	1656, 317	1336, 241
60	99434,8 20	19182,7 32	80252, 088	1657, 247	1337, 535	319,712	1655, 697	1335, 379
70	115985, 590	22388,3 38	93597, 252	1656, 937	1337, 104	319,833	1655, 077	1334, 516
80	132530, 160	25596,3 68	10693 3,792	1656, 627	1336, 672	319,955	1654, 457	1333, 654
90	149068, 530	28806,8 22	12026 1,708	1656, 317	1336, 241	320,076	1653, 837	1332, 792
100	165600, 700	32019,7 00	13358 1,000	1656, 007	1335, 810	320,197	1653, 217	1331, 929
110	182126, 670	35235,0 02	14689 1,668	1655, 697	1335, 379	320,318	1652, 597	1331, 067
120	198646, 440	38452,7 28	16019 3,712	1655, 387	1334, 948	320,439	1651, 977	1330, 204
130	215160, 010	41672,8 78	17348 7,132	1655, 077	1334, 516	320,561	1651, 357	1329, 342
140	231667, 380	44895,4 52	18677 1,928	1654, 767	1334, 085	320,682	1650, 737	1328, 480
150	248168, 550	48120,4 50	20004 8,100	1654, 457	1333, 654	320,803	1650, 117	1327, 617
160	264663, 520	51347,8 72	21331 5,648	1654, 147	1333, 223	320,924	1649, 497	1326, 755
170	281152, 290	54577,7 18	22657 4,572	1653, 837	1332, 792	321,045	1648, 877	1325, 892
180	297634, 860	57809,9 88	23982 4,872	1653, 527	1332, 360	321,167	1648, 257	1325, 030
190	314111, 230	61044,6 82	25306 6,548	1653, 217	1331, 929	321,288	1647, 637	1324, 168
200	330581, 400	64281,8 00	26629 9,600	1652, 907	1331, 498	321,409	1647, 017	1323, 305

Source: KPBS, KPSBU, KPS, (2013)



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