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ANALYSIS OF GOVERNMENT'S SUPPORTING CAPACITY AND POLICY ON PINEAPPLE COMMODITY IN TIDAL LAND OF BARITO KUALA REGENCY, INDONESIA

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ABSTRACT
Pineapple commodity provides a positive prospect for producers, in this case the farmers who cultivate it. Pineapple commodity itself is a type of plant commodity that is not so difficult to cultivate. Pineapple commodity in South Kalimantan itself is a commodity that is widely cultivated by people in tidal swamp land, namely in Barito Kuala Regency. Based on BPS data from South Kalimantan Province, in 2019 it showed that pineapple production in South Kalimantan was 123,578 tons, and the production contribution from Barito Kuala Regency was 119,732 tons. This amount of production increased in 2020, where pineapple production in Barito Kuala Regency was 125,463 tons or 96.59% of production in Kalimantan. The aims of this research are to: 1) analyze the impact of changes that occur on outputs and inputs; and 2) analyzing the carrying capacity of pineapple farming in tidal lands of Barito Kuala Regency. The analysis used is the *Policy Analysis Matrix* (PAM) and the *Diamond Porter*. The results of the analysis show that the Transfer Output value in the tidal land of Barito Kuala Regency is negative Rp. 1,988.30 per kilogram of pineapple. The value of the nominal output protection coefficient (NPCO) obtained is 0.58. The value of Transer Input (TI) obtained negative is 18.42.value of nominal input protection coefficient (NPCI) obtained is 0.65. The Transfer Factor (TF) value is negative, namely Rp. 25.13. The value of the coefficient of Effective Protection (EPC) is 0.58. The net transfer value (TB) obtained was negative Rp. 1,944.74 per kilogram of pineapple. The Coefficient of Profit (PC) obtained by pineapple farmers in tidal lands in Barito Kuala Regency is 0.47. The Subsidy Ratio for Producers (SRP) obtained is negative 0.41. Based on the analysis of Diamond Porter as a whole, it shows that the conditions in the research area support the increase in the exploitation of pineapple commodities.

KEY WORDS
Diamond porter, pineapple, PAM, Tidal Land.

One of the horticultural commodities that have prospects for export is fruits. According to the BPS term, fruit plants are plants that are a source of vitamins, salt, minerals and others, which are consumed from plant parts in the form of fruit which are generally annual plants (Suri, 2017).

In 2012-2017, the export weight of fruit commodities continued to increase from 291.5 thousand tons in 2012, to 305.9 thousand tons in 2013; 516.7 thousand tons in 2014; 673.3 thousand tons in 2014; 766.1 thousand tons in 2015; 766.1 thousand tons in 2016; and reached 1.0 million tons in 2017. However, the export weight of this commodity then decreased in 2018-2019 to 791.7 thousand tons and 753.3 thousand tons, respectively (BPS RI, 2019).

In terms of value, annual fruit commodity exports declined in 2013 from US$168.3 million to US$119.6 million. In 2014 - 2017, the export value of this commodity continued to increase, to US$184.7 million in 2014; US$ 249.1 million in 2015; US$282.0 million in 2016; and US$362.1 million in 2017. Then, in 2018, the export value of this commodity decreased 17.75 percent to US$297.8 million. The annual export value of fruit commodities finally increased again in 2019 to US$323.5 million (BPS RI, 2019).

Pineapple commodity in South Kalimantan itself is a commodity that is widely cultivated by people in tidal swamp land, namely in Barito Kuala Regency. Based on BPS data from South Kalimantan Province, in 2019 it showed that pineapple production in South Kalimantan was 123,578 tons, and the production contribution from Barito Kuala Regency was 119,732 tons. This amount of production increased in 2020, where pineapple production in Barito Kuala Regency was 125,463 tons or 96.59% of production in South Kalimantan (BPS Kalimantan Selatan, 2021).

Every 100 g of pineapple contains 80% - 86.2% water, 10 g – 18 g sugar, 0.5 g – 1.6 g organic acids, 0.3 g – 0.6 g minerals, 4.5 mg – 12 mg nitrogen, and 180 mg protein. Besides that, pineapple fruit also contains all vitamins in small amounts, except vitamin D. Pineapple also contains bromelain which can hydrolyze protein, so it can soften the meat. Pineapple rind can be processed into syrup or extracted liquid for animal feed. Fiber, especially in leaves, can be processed into paper and textiles (Hadiati & Indriyani, 2008).

Swamp land can be said to be land that gets the influence of tides or surrounding rivers. During the rainy season the land is inundated up to one meter, but in the dry season it becomes dry and even some of the groundwater level drops to the bottom or depth > 50 cm from the ground surface (Sunaro, 2014). Based on the chemical nature of the tides, the tidal land is divided into two zones, namely the saline tidal zone and the freshwater tidal zone (Widjaja-Adhi 1986; Widjaja-Adhi and Alihamsyah 1998 in Arsyad, 2014). Tidal swamp land is divided into four types, namely types A, B, C and D (Noor, 2001).

Suharyati et al (2016), in his research explains that the competitive advantage of organic rice in Karanganyar Regency is greater than its comparative advantage; this is evidenced by the PCR value (0.74) which is greater than the DCR value (0.56). Saptana et al (2021) in their research using PAM explained that garlic farming in Indonesia has a comparative advantage, but does not have a competitive advantage. This is indicated by DCR > 1.

METHODS OF RESEARCH

The research will be conducted in Barito Kuala District. Determination of the location of this research was done deliberately, with the consideration that the location is an area that has the largest pineapple production compared to other districts in South Kalimantan.

The data analysis method in this study uses the Policy Analysis Matrix (PAM). PAM consists of a matrix compiled based on the results of financial (private) and economic (social) analysis. The first line estimates private profits, ie the calculation of revenues and costs based on current prices, which reflect values influenced by government policies. The second line estimates social benefits, i.e. the calculation of revenues and costs with social prices (the price that will result in the best allocation of resources and automatically generate the highest income). The third line describes the divergence which is the difference between the first line and the second line. The PAM table can be seen in Table 1.

Table 1 – Policy Analysis Matrix (PAM)

Description	Output of Revenue	Input Cost		Profit
		Tradable	Non Tradable	
Private Price	A	B	C	D
Social Price	E	F	G	H
Divergence	I	J	K	L

Source: Monke and Pearson, 1989. Note: Private Profit: D = A – B – C; Social Benefit: H = E – F – G; Output Transfer: I = A – E; Input Transfer: J = B – F; Transfer Factor: K = C – G; Net Transfer: L = D – H; Producer Subsidy Ratio: SRP = L / E; Private Cost Ratio: PCR = C / (A – B); Domestic Resource Cost: DRC = G / (E – F); Nominal Output Protection Coefficient: NPCO = A / E; Coefficient Nominal Input Protection: NPCI = B / F; Effective Protection Coefficient: EPC = (A – B) / (E – F); Profit Coefficient: PC = D / H.

Diamond Porter analysis is used to determine the level of competitiveness or competitive advantage of an industry. The analysis is carried out on each component contained in the Diamond Porter theory. These components include:

- Factor Condition (FC), namely the state of production factors in an industry such as labor and infrastructure;
- Demand Condition (DC), namely the state of demand for goods and services in the country;
- Related and Supporting Industries (RSI), namely the condition of suppliers and other industries that support and relate to each other;
- Firm, Strategy, Structure, and Rivalry (FSSR), namely the strategy adopted by the company in general, the industry structure and the state of competition in a domestic industry.

The four components are supported by the government's role and the role of opportunity in increasing the competitiveness of the national industry, and together form a system known as The National Diamond. Each component contained in Porter's Diamond Theory has important points that explain in detail the existing components (Porter 1990 in Puspita, 2009).

RESULTS AND DISCUSSION

Government policy on output can be seen from two values, namely Output Transfer (TO) and Nominal Output Protection Coefficient (NPCO). Output Transfer Value (TO) and Nominal Output Protection Coefficient (NPCO) of pineapple farming in tidal lands of Barito Kuala Regency, can be seen in Table 2.

Table 2 – Indicators of Analysis of the Impact of Government Policy on the Output of Nana's Business in tidal lands of Barito Regency Kuala

Indicator	Value
Output Transfer	-1.988.30
Nominal Output Protection Coefficient (NPCO)	0.58

The results of the analysis show that the output transfer value in the tidal land of Barito Kuala Regency is negative Rp. 1,988.30 per kilogram of pineapple. This means that the output price of pineapple in the domestic market is lower than the price in the international market or there is a transfer of output from producers to consumers of Rp. 1,988.30 so that consumers buy pineapple commodities at a lower price than the actual price. A negative output transfer value also means that there is a negative subsidy policy or tax on output that makes the private price lower than the social price.

Based on Table 2, the NPCO value obtained in pineapple cultivation in the tidal land of Barito Kuala Regency is 0.58, indicating that there is a government policy in the form of negative subsidies (taxes) which causes the financial price to be lower than the shadow price. Pineapple producers in the tidal land of Barito Kuala Regency only received a price of 58 percent of the price they should have received. This condition results in producers not getting incentives to increase their production.

The impact of these export barriers does not only affect farmers, export barriers also affect domestic consumers of pineapples. The price received by consumers is lower than the price that should be received. From this analysis, it is evident that export barriers aim to protect domestic consumers.

The input policy is in the form of subsidies and import barriers for agricultural inputs, with the aim that producers can utilize resources optimally and protect domestic producers. Indicators of the impact of government policies on inputs can be seen in Table 3.

Table 3 – Indicators of Analysis of the Impact of Government Policies on Inputs Pineapple cultivation in tidal lands of Barito Kuala Regency

Indicators	Value
Input Transfer	-18.42
Nominal Input Protection Coefficient (NPCI)	0.65
Transfer Factor (TF)	-25.13

Transfer Input (TI) value in Table 3, obtained negative 18.42, meaning that government policies on tradable inputs benefit pineapple farmers in tidal lands in Barito Kuala Regency by IDR 18.42 per kilogram of pineapple. This means that there is a subsidy on foreign inputs (fertilizer) from the government so that the price paid by farmers for these inputs is lower than the actual price.

Based on the analysis results, the NPCI value obtained by pineapple farmers in tidal lands in Barito Kuala Regency is 0.65 (Table 3). This value means that there is a protection policy for input consumers in the form of subsidies which causes the financial input price to be lower than the shadow price. So that pineapple cultivation in the tidal land of Barito Kuala Regency receives a cheaper input price of 65 percent of the price it should be.

In addition to tradable inputs, producers also use domestic inputs that are not traded on the world market (*non-tradable*). The quantity that shows the difference between the price actually received by producers and the social price for payment for *non-tradable* called Transfer Factor (TF).

Based on the data presented in Table 3, it shows the value of Transfer Factor (TF) in pineapple cultivation in the tidal land of Barito Kuala Regency is negative, namely Rp. 25.13. This value indicates that the price *non-tradable* issued at financial prices is lower than the *non-tradable* issued at social prices. This means that farmers pay lower *non-tradable* costs than they should pay. So that farmers get a profit of Rp. 25.13 per kilogram of pineapple.

Government policy analysis on input-output is a combination of input policy and output policy. The results of the calculation of indicators on the input-output policy analysis of pineapple farming in tidal lands of Barito Kuala Regency can be seen in Table 4.

Table 4 – Indicators of Government Policy Impact Analysis on Input-Output Pineapple cultivation in tidal lands of Barito Kuala Regency

Indicator	Value
Coefficient Effective Protection (EPC)	0.58
Net Transfer (TB)	-1.944.74
Profit Coefficient (PC)	0.47
Subsidy Ratio for Producers (SRP)	-0.41

The results of the analysis show that the value of the coefficient of Effective Protection (EPC) for pineapple cultivation in the tidal area of Barito Kuala Regency is 0.58. This means that the impact of government policies on input-output on pineapple cultivation in tidal lands of Barito Kuala Regency has not been running effectively or current government policies do not support or protect pineapple farmers on tidal lands of Barito Kuala Regency to produce.

Net Transfer (TB) is the difference between private and social benefits. The TB value indicates that there is an additional producer surplus or a reduced producer surplus due to government policies. A positive TB value indicates that there is an incentive policy that increases producer surplus, meanwhile negative TB value results in a reduced producer surplus. Based on the results of the analysis, it was found that the TB value obtained by pineapple farmers in the tidal land of Barito Kuala Regency was negative Rp. 1,944.74 per kilogram of pineapple (Table 4). This means that there is no visible economic incentive to increase pineapple production. So that the producer surplus is reduced by Rp. 1,944.74 per kilogram of pineapple.

The PC value obtained by pineapple farmers in the tidal land of Barito Kuala Regency is 0.47 (Table 4), meaning that government policy causes the profits obtained from pineapple cultivation in the tidal land of Barito Kuala Regency to be 47 percent of the profits that should be obtained. Thus, government policies cause the net benefits received are smaller than the net social benefits.

Subsidy to Producers Ratio (SRP) is the ratio between net transfers and revenues based on shadow prices. The value of the negative subsidy ratio for producers (SRP < 0) indicates that the government policies that have been in effect so far have caused producers to incur production costs for inputs that are greater than the offset costs for producing. Meanwhile, if the value of the Subsidy Ratio for Producers is positive (SRP > 0), it means

that there is a government policy that causes producers to incur lower production costs for inputs than the balanced cost of producing. The ratio of subsidies to producers obtained by pineapple farmers in Tidal Land, Barito Kuala Regency, is negative 0.41. This SRP value means that government policies that have been in force so far have caused pineapple farmers to incur production costs greater than 41 percent of the*opportunity cost*to produce.

Resource factors are divided into five groups, namely physical or natural resources, human resources, science and technology resources, capital resources, and infrastructure resources.

Physical or natural resources at the research site are quite abundant. The condition of the land that is quite in accordance with the conditions for growing pineapples is an added value to the pineapple business. Farmers in tidal land have implemented the surjan system as a form of adaptation to the conditions of tidal swamp land. The availability of water directly comes from the source, namely there are river flows in the Barito Kuala Regency area.

The pineapple business at the research location uses local workers as human resources, both in the form of workers within the family and outside the family. Its activities are working activities, namely every month doing maintenance on the garden. Its activities include weeding and land preparation. The arisan workers do not get wages, therefore the calculation is considered as labor in the family. Furthermore, in harvesting activities using labor outside the family, because the labor used is paid directly with wages. The level of wages given varies between farmers.

Managerial abilities and skills are supported by the existence of farmer group organizations. The existence of farmer groups makes it easier for farmers to get information and assistance in the form of training and assistance.

Science and technology resources are obtained through various agencies in the form of socialization and training. Through field extension workers, the government provides various information on innovation and technology regarding pineapple cultivation. And through academics, farmers get information and additional knowledge in the form of community service and assistance.

Farmers' capital can be accessed through various sources, ranging from government assistance, middlemen, to banks. Government assistance received by farmers such as product development assistance, in the form of tools and post-harvest processing of pineapple. The source of loans from middlemen is in the form of cash capital for cultivation capital, but there are agreed terms. Meanwhile, from banks, it is in the form of low interest loans through the KUR program. Infrastructure resources can be seen from road conditions that have started to improve from year to year based on farmer information. Although some are still in the process of being repaired, and there is still a lack of street lighting. This is related to access to the distribution of agricultural products.

The inputs used in pineapple farming are seeds, fertilizers and medicines. Conditions at the research site indicate that there are several individual producers who provide seeds for themselves and others. Almost all farmers carry out nursery activities, both for pineapple plants and others. This is a side business for farmers. because the seeds it makes, can be sold to consumers.

One of the pineapple marketing service industries in the research area is collector traders. At the time of purchase, together with farmers and traders, sorting of pineapples. Based on the overall information from the respondents, there are 7 village-level collectors in the research location. Based on the conditions in the field, the partnerships carried out by farmers are only limited to collecting traders. Smallholders have not implemented partnerships with various companies, because they are reluctant to be bound by contracts.

The market structure that is formed is included in the competitive market because there are many sellers and buyers even though the number of sellers is more than the buyers. Farmers act as sellers of pineapples and all trading institutions that trade pineapples with farmers are buyers. Some farmers sell pineapple in the form of seeds.

The level of competition in pineapple business is very high because of the prevailing market structure. It is difficult for new market players to enter the market because each farmer already has their own collector's subscription. The bond between farmers and

collectors has been around for a long time. Almost all farmers in the research location have very strong family ties, so the bond between farmers and collectors is difficult to remove.

Product Strategy. Farmers have not done to maintain product quality to keep it good, because they do not know how to maintain it. Pineapple with unique characteristics causes its quality to be unpredictable. This is an obstacle in the cultivation of pineapple at the research site.

Pricing Strategy. In maintaining farm profits, pineapple farmers in the research area regulate fruit stimulants. If in a certain month it can be estimated that there is not much *supply* in the market, then they will give ethril as a fruit stimulant, so that fertilization is faster and the fruit harvest can be estimated. Therefore, the price of pineapple will remain at a more stable price.

Promotion Strategy. Farmer groups carry out promotions with the help of local governments. Promotional activities carried out are by participating in agricultural product exhibitions by presenting processed products from pineapple. In addition to this, there is also an annual tamban/mekarsari pineapple festival as an example.

Distribution Strategy. There is no distribution strategy undertaken by farmers such as shortening the marketing chain. This is because in farmer groups, the collectors in each marketing chain are relatives or people around the farmers themselves. If the marketing chain is broken, farmers think it can stop their family's sustenance, which acts as a trading institution.

CONCLUSION

The results of the analysis show that the output transfer value in the tidal land of Barito Kuala Regency is negative Rp. 1,988.30 per kilogram of pineapple. The value of the nominal output protection coefficient (NPCO) obtained is 0.58. The value of Transer Input (TI) obtained negative is 18.42.value of nominal input protection coefficient (NPCI) obtained is 0.65. The Transfer Factor (TF) value is negative, namely Rp. 25.13. The value of the coefficient of Effective Protection (EPC) is 0.58. The net transfer value (TB) obtained was negative Rp. 1,944.74 per kilogram of pineapple. The Coefficient of Profit (PC) obtained by pineapple farmers in tidal lands in Barito Kuala Regency is 0.47. The Subsidy Ratio for Producers (SRP) obtained is negative 0.41.

Based on the analysis of Diamond Porter as a whole, it shows that the conditions in the research area support the increase in the exploitation of pineapple commodities.

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