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Daya Saing dan Kebijakan Usahatani Kedelai di Kabupaten Jeneponto

Competitiveness and Policy of Soybean Farming in Jeneponto Regency

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ABSTRACT

The demand for local soybean commodities is very low compared to imported soybeans, which affects the decline in soybean planting area, and farmers are also less willing to farm soybeans because they are less profitable. Government policies related to soybean self-sufficiency are widely carried out, but imported soybean commodities still have stronger competitiveness. This study aims to analyze the competitiveness and government policies on soybean farming in Tamalatea District, Jeneponto Regency. This study used a survey method. Data collection techniques are observation and interviews. The sampling technique using purposive sampling is to choose soybean farmers who are more productive in their farming, so that the number of samples obtained is 48 farmers. The data analysis technique is quantitative descriptive analysis with the Policy Matrix Analysis method. The results of this study indicate that soybean farming has strong competitiveness, because it has a Private Cost Ratio value of 0.2077 and a Domestic Resource Cost Ratio of 0.1628, with a private profit of Rp 5,752,342.42 per hectare and social profit of Rp 7,682,461.16 per hectare. The input policy on soybean farming resulted in values including: input transfer (IT) of -184,240.32, transfer factor (TF) of Rp 14,365.87, and nominal protection coeficient input (NPCI) of 0.61104. Meanwhile, the output policy resulted in an output transfer (OT) value of Rp -2,099,993.19 and a nominal protection coefficient input (NPCO) of 0.7824. Input-output policies have values including: effectivity policy coeficient (EPC) of 0.7912, subsidy ratio for producer (SRP) of -0.20001, profitability coeficient (PC) of 0.7488, and net transfer (NT) of -1,930,118.73. Government policies that are protective of tradable inputs have a positive impact on soybean farming, so farmers pay lower prices than they should. Government protection policies against tradable output have not been effective, so soybean farmers get output prices that are lower than the price they should. Government policy on tradable inputs simultaneously has not been effective in protecting soybean farming, so it has not been able to provide incentives for increased production.

Keywords: *competitiveness, farming, policy, soybean*

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INTRODUCTION

Soybean is the main food commodity in Indonesia after rice and corn. Compared to animal protein, protein from soybeans is cheaper and affordable for the people of Indonesia. The problem with soybeans in Indonesia today is that domestic soybean production is decreasing, so they still rely on imported soybeans for the production of processed soybeans such as tofu and tempeh. Soybean production in Indonesia in 2019 was

424.19 thousand tons of dry beans, and in 2020 it decreased to only about 289.86 thousand tons. Meanwhile, direct consumption of soybeans in Indonesia is around 13 thousand tons and for industrial needs it reaches 3 million tons. The high level of demand for soybeans in Indonesia causes a high need for imports (Kementerian Pertanian, 2021).

Soybeans are a strategic commodity with high demand, downstream products are very diverse and of high value, including feed, food, energy and industrial raw materials. The increase in consumption continues to increase, but cannot be offset by the increase in domestic production. Imports are still the mainstay, so there are often price and supply fluctuations due to changes in the macroeconomic and supply situation in the international market. Soybean productivity which is still very low is an obstacle to increasing production due to limited superior seeds, the availability of fertilizers and other production facilities. Land potential and climate suitability for cultivation are inhibiting factors for expansion and increase in production (Bantacut, 2017). Yellow soybeans as the main raw material for making tempeh and tofu are varieties that are less optimal growth in Indonesia because the climate is not suitable. This is the cause of low domestic soybean production. If soybean imports are allowed to remain high, it will certainly reduce existing foreign exchange reserves, for this reason, efforts need to be made to increase domestic soybean production (Adri et al. 2020).

Soybean commodities have various uses, especially as industrial raw materials, protein-rich vegetables, and as raw materials for the animal feed industry. Apart from being a source of vegetable protein, soybeans are a source of fat, minerals, and vitamins and can be processed into various foods such as tofu, tempeh, tauco, soy sauce, and milk (Natalia et al. 2017). Domestic soybeans are safer to consume than GMO soybeans, and have higher protein content than imported soybeans. The development of domestic soybeans is still prospective, but the competitiveness of domestic soybeans against imported soybeans is getting heavier due to the abundance of imported soybeans. Government policy in the form of input-output is expected to be able to protect domestic soybeans to be competitive (Chanifah et al. 2020). The challenge to increase the competitiveness of soybean commodities is a matter of productivity. Although Indonesia's emphasis on soybean self-sufficiency and efforts to grow production, the program faced obstacles. Low yields and limited profitability from soybeans imply that Indonesian farmers will continue to plant rice or corn (Mbana et al. 2020).

Soybean production is concentrated in Java, in the period 2012-2016, with a contribution to national production reaching 65.27 percent or 574.38 thousand tons. The average consumption per capita of Indonesian society in 2015 was 6.12 kg/capita/year. The balance of supply and demand for soybeans in Indonesia in the period 2016-2020 is projected to experience an average deficit of 36.95 percent per year (Kementerian Pertanian, 2020).

Jeneponto Regency is one of the districts included in the South Sulawesi Province, most of which has land in the form of dry land. In 2021, the soybean planting area in Jeneponto Regency reached 1,020 hectares with a harvest area of 535 hectares, while production reached 741.1 tons with a productivity of 1.39 tons per hectare. Tamalatea District, which is one of the soybean production centers in Jeneponto Regency, has a planting area of 250 hectares with a harvest area of 200 hectares, and production reaches 290 tons with a productivity of 1.45 tons per hectare (BPS Jeneponto Regency, 2022).

Soybeans are a strategic commodity that can be developed in Jeneponto Regency, however, the area of soybean crop harvest is declining. This condition is due to low demand for local soybean commodities, so that output prices cannot compete with imported soybean prices. The government has issued several policies related to soybean self-sufficiency, both input and output policies. Strengthening the competitiveness of soybean farming through intensification, extensification, and implementation of agricultural policies is expected to be able to support food independence and reduce imports, so that soybean self-sufficiency can be fulfilled. This study intends to evaluate Jeneponto Regency's soybean agricultural policy and competitiveness.

RESEARCH METHODS

Tonrokassi Village, Tamalatea District, Jeneponto Regency were the sites of this study. In this study, survey methodologies were used, with data collected through observation and structured interviews. Research sampling was carried out by purposive sampling method, which is deliberately selecting samples from soybean farmers who are relatively more productive in their farming. The total sample obtained was 48 respondents. The types of data used are primary and secondary.The data analysis methods used are quantitative descriptive statistical analysis, profitability analysis, and Policy Analysis Matrix.

To determine the competitiveness of soybean farming, the Policy Analysis Matrix (PAM) analysis tool is used. According to (Pearson et al. 2005), to measure competitive advantage can be done by calculating private profitability, and to measure comparative advantage can be done by calculating social profitability. Table 1 shows the Policy Analysis Matrix (PAM) model with the formulation.

Table 1. Policy Analysis Matrix (PAM)

Description	Revenues	Costs		Profits
		Tradable Inputs	Domestic Factors	
Private prices	A	B	C	D = A – B - C
Social prices	E	F	G	H = E – F - G
Divergences	I = A – E	J = B – F	K = C – G	L = D – H = I – J – K

Source: Pearson, et al. (2005).

Description :

A : private revenue
B : private tradable input costs
C : private non-tradable input costs
D : private profits
E : social revenue
F : social tradable input costs
G : social non-tradable input cost
H : social profits
I : output transfer
J : transfer of tradable inputs
K : transfer factor
L : net transfer

Table 2. Indicator Analysis in Policy Analysis Matrix (PAM)

Description	Formula	Indicator
Private profit	D = A – B – C	D > 0
Social profit	H = E – F – G	H > 0
Output transfer	I = A – E	I > 0
Input transfer (input tradable)	J = B – F	J > 0
Transfer factors (non tradable inputs)	K = C – G	K > 0
Net transfer	L = D – H; L = I – J – K	L > 0
Private cost ratio	PCR = C/(A–B)	PCR < 1
Domestic resource cost ratio	DRCR = G/(E–F)	DRCR < 1
Nominal protection coefficient output	NPCO = A/E	NPCO > 1
Nominal protection coefficient input	NPCI = B/F	NPCI < 1
Effective protection coefficient	EPC = (A–B)/(E–F)	EPC > 1
Profit coefficient	PC = (A–B–C)/(E–F–G); D/H	PC > 1
Subsidy ratio producer	SRP = L/E; SRP = (D-H)/E	SRP > 0

Source: Pearson, et al. (2005).

RESULTS AND DISCUSSION

Analysis of The Competitiveness of Soybean Farming. The profitability of soybean farming in this study is seen from two aspects, namely private benefits and social benefits. Private profit is based on the actual price or the price received by farmers, social profit is profit based on social prices, where social prices or shadow prices are the prices that actually occur in perfectly competitive markets, and these prices are not subject to government policy or market distortion. These social prices reflect the real price of inputs used in farming and the actual price of output. Government policies in soybean farming include fertilizer subsidies,

and credit interest subsidies. In the calculation of social prices, all policies are omitted from the price component. The PAM (Policy Analysis Matrix) analysis presented in Table 3 forms the basis of the analysis of the competitiveness and policy of soybean farming.

Table 3. Policy Analysis Matrix Results on Soybean Farming in Tamalatea District, Jeneponto Regency

Description	Revenues (IDR/ha)	Costs (IDR/ha)		Profits (IDR/ha)
		Tradable Inputs	Domestic Factors	
Private prices	7,549,899.55	289,428.28	1,508,128.84	5,752,342.42
Social prices	9,649,892.73	473,668.61	1,493,762.97	7,682,461.16
Divergences	-2,099,993.19	-184,240.32	14,365.87	-1,930.118.73

Source: Primary Data Analysis, 2022.

Private profits obtained in soybean farming amounted to Rp 5,752,342.42 per hectare per planting season. If D > 0, it means that the commodity system earns profits above normal. This has implications that soybean farming can be expanded. Conversely, if the D value ≤ 0, it means that the commodity system has obtained profits below normal and cannot be expanded. Thus, soybean farming in the Tamalatea District area is feasible for expansion, considering the value of private profitability is above normal (above the breakeven point), so that in the long run it is more profitable.

In Jeneponto Regency, the social gains from soybean growing amounted to Rp 7,682,461.16 per hectare every planting season. If H > 0, social advantage is an indicator of the commodities system's comparative advantage or efficiency under conditions of no divergence and efficient policy implementation. If H is zero, the commodity system is unable to compete without government support or intervention. Thus, the analytical results reveal that soybean cultivation carried out by farmers in the Jeneponto Regency region had comparative advantages and was effective even without government support or intervention.

To assess the financial sustainability of soybean cultivation, a competitive advantage analysis is employed. A commodity's competitive advantage can be seen through indices of private profitability (PP) and private cost ratio (PCR). The indicator displays the level of financial return as well as the level of resource efficiency. If the PCR value is greater than one, it indicates that the soybean agricultural production system is more competitive and capable of financing its domestic factors at private pricing, and its ability will grow. When PCR ≥ 1, the commodity system under consideration has no competitive advantage.

The soybean farming PCR score of 0.2077 indicates that the soybean farming production system has a competitive advantage. The soybean agricultural system is becoming more competitive and capable of financing its domestic factors at private pricing, and this capability will grow. The amount of resource allocation efficiency can be quantified using the private cost ratio (PCR), which demonstrates that for every 1 rupiah gained from soybean farm income, a reduced domestic input cost of 0.2041 rupiah is required. Soybean farming has been financially effective and competitive with a PCR value of less than one (PCR < 1) since farmers were regarded as able to finance their domestic factors at private pricing under these conditions.

Comparative advantage can be calculated by utilizing the value of social profitability (SP) and the ratio of domestic resource costs (DRC) as indicators to determine if soybean farming remains competitive in the absence of government aid. The distinction between social profit (SP) and private profit (PP) analysis is that in social profit, the input and output components are analyzed using shadow prices.

In addition to social benefits, the DRC indicator, which is the ratio of local costs and receipts minus international expenses at prices without government involvement (shadow pricing), might show a comparative advantage. A farm is economically efficient if it obtains less than one DRC (DRC < 1); the lower the DRC value, the larger the comparative advantage; and if the DRC is greater than one (DRC > 1), it demonstrates inefficiencies in domestic resources. The DRC value achieved is 0.1628, indicating that soybean cultivation is

profitable and has a competitive edge. With the DRC value, domestically produced soybean commodities are more efficient than imported soybean commodities, resulting in greater export potential.

Despite the provision of financial assistance, the results showed that soybean competitiveness was lower than rice and corn (Mbana et al. 2020). According to Krisdiana *et al.* (2021), utilizing improved varieties of soybean yielded 2.24 ton per hectare and 2.09 ton per hectare, which was greater than using local (non-improved) varieties. Soybeans were less competitive in Mojokerto and Pasuruan than maize and mungbean. Soybean might compete with other crops if production and prices were higher than they are now. To compete with maize, soybean production should be 5.14 - 5.22 tons per hectare, based on the current soybean price per kg of IDR 7,200 (about US $0.51). To compete with maize on price, the soybean selling price per kg should be IDR 14,428-IDR 14,893 (approximately USD 1.06) with a productivity level of 2.24 tons per hectare.

In terms of trade regime, soybeans do not have competitiveness, both in inter-regional trade, import substitution, and as export promotion. Soybeans have no comparative or competitive advantages reflected by DRC and PCR scores greater than 1.00. Indonesian soybean farming is not able to compete at the global level. Producer prices as a proxy of production costs are very high compared to other soybean producing countries. The high cost of production also reflects inefficient farming (Swastika, 2022). Soybean farming in Banten Province still has relatively low competitive and comparative advantages with a PCR of 0.79 and DRCR of 0.92, so that soybean commodities have relatively low competitiveness (Siagian et al. 2014).

Soybean farming in Globogan Regency provides competitiveness and comparative advantage as evidenced by PCR and DRC cultivation results showing values less than 1. The PCR value of soybean farming is 0.30, with a DRCR value of 0.44. Soybean farming provides financial and economic benefits as seen from the results of the analysis which shows a value of > 1. The financial benefit obtained from soybean farming for one planting season is IDR 6,337,411.00 per hectare, with an economic benefit value of IDR 5,318,606.00 per hectare (Saputra et al., 2021). Domestic soybean cultivation in Globogan Regency is competitive as it has a PCR value of 0.88 and a DRCR of 0.92, possessing competitiveness and comparative advantages. The level of competitiveness of these farmers is still very vulnerable to policy changes because PCR and DRCR values are close to 1 (Chanifah et al. 2020).

Ratna et al. (2013) discovered that soybean production on semi-technical land yielded private advantages of IDR 5,139,011.00 per hectare and societal profits of IDR 1,337,776.00 per hectare. With a DRC value of 0.8058 and a PCR value of 0.5622, soybean cultivation on semi-technical terrain offers a comparative and competitive advantage. According to the findings of Kata et al. (2020), soybean cultivation on dry ground in Tebo Regency is competitive, as evidenced by the level of financial benefits of IDR 2,093,757.31 and economic benefits of IDR 1,238,295.14. Competitive advantage and comparative advantage yielded PCR values of 0.74 and DRC values of 0.84. According to Saputra et al. (2020), soybean cultivation in Grobogan Regency gives financial and economic benefits, as seen by the analysis results, which demonstrate a value greater than one. In one growing season, the financial benefits of soybean cultivation are IDR 6,337,41.00 per hectare, with a profit value of IDR 5,318,606.00 per hectare.

According to Haryanto (2019), soybean farming has a competitive advantage and a comparative advantage. The sensitivity analysis results show that output price policy is an effective tool for increasing the profitability and competitiveness of Indonesian soybean production. According to Anggraeni et al. (2018), the PCR value of 0.75 indicates that soybean growing in Grobogan Regency is more competitive, while the Domestic Resources Cost Ratio (DRCR) of 0.88 indicates that soybean cultivation has a comparative advantage. Saputra et al. (2020) discovered that soybean growing in Grobogan Regency has a competitive and comparative advantage based on PCR and DRC farming outcomes, with a value of < 1. Soybean cultivation has a PCR value of 0.30 and a DRC value of 0.44.

Policy Analysis on Soybean Farming. The high level of soybean consumption in Indonesia causes a high need for imports. In 2018, the special effort program (Upsus) was concentrated on soybean commodities

by targeting an increase in planting area. With the increase in acreage, self-sufficiency in soybeans can be achieved. The food policy of the Ministry of Agriculture has improved the trade performance of agricultural commodities, in addition to encouraging increased production and ensuring food availability. In addition, the price of soybeans has been guaranteed by the government by imposing a Government Purchase Price (HPP) of Rp 8,500.00/kg as stated in the Regulation of the Minister of Trade (Permendag) Number 27/MDAG/PER/5/2017. One of them is to ensure the welfare of farmers. The Upsus Pajale program is also expected to be able to improve the quality of farmers' resources who are members of farmer groups, can have managerial skills and can be competitive in their farming so that farmers have a high bargaining position as the main actors in agricultural development (Septiana & Trimo, 2019; Humaidi et al., 2021).

Government policies on soybean input and output under the Upsus Pajale program and fertilizer subsidies could increase the competitiveness of mainland soybeans in Tebo Province through impact on revenue and cost, but soybean HPP policy and zero percent soybean import tariff policy has been able to increase the competitiveness of mainland soybeans in Tebo province. Soybeans could not be made more competitive.

Government policies and fertilizer subsidies on soybean input and production under the Upsus Pajale program have made dryland soybeans more competitive in Tebo District. This can be seen by looking at the impact on profits and costs, but the soybean HPP (government purchase price) policy and the zero-percent import tariff policy did not increase the competitiveness of soybeans. In addition, although the Upsus Pajale policy makes soybean productivity at the research location relatively high, it is not high enough to be able to lift competitiveness in front of imported soybeans (Kata et al. 2020). Soybean farming in Indonesia is strongly influenced by government policies related to input and output variables. Government policies will have a positive and negative influence on both farmers and society in general, and government policies must not only benefit farmers from the on-farm side, but must also provide benefits to the wider community as the largest soybean consumers (Chanifah et al. 2020).

Government policies related to international trade and macroeconomic policies also affect the competitiveness of agricultural commodities. The calculation results in the PAM table, government policies on soybean farming in Tamalatea District, Jeneponto Regency is shown in Table 4.

Table 4. Analysis of Government Policy on Soybean Farming in Tamalatea District, Jeneponto Regency

Description		Unit	Value
Output transfer	(OT)	IDR	-2.099.993,19
Input transfer	(IT)	IDR	-184.240,32
Transfer factor	(TF)	IDR	14.365,87
Net transfer	(NT)	IDR	-1.930.118,73
Coefficient of profit	(PC)	%	0,7488
Nominal protection coefficient output	(NPCO)	%	0,7824
Nominal protection coefficient input	(NPCI)	%	0,61104
Effective protection coefficient	(EPC)	%	0,7912
Subsidy ratio producer	(SRP)	%	-0,20001

Source: Primary Data Analysis, 2022.

Import tariffs, VAT taxes, and subsidies are examples of government policies on agricultural inputs. The Regulation of the Minister of Finance of the Republic of Indonesia Number 244/PMK.011/2014 specifies an import tariff of 5% and a value-added tax of 10% for imports of mineral fertilizers or chemical fertilizers containing nitrogen, phosphate, and potassium. The government's fertilizer subsidy program is outlined in Regulation of the Minister of Finance of the Republic of Indonesia Number 122 Permentan/SR.130/11/2013 about the Highest Demand and Price of Subsidized Bright Fertilizer (HET) for the Agricultural Sector for Fiscal Year 2014. The government sets the highest retail price of subsidized fertilizers, namely urea fertilizer

IDR 1,800.00 per kilogram, SP-36 fertilizer IDR 2,000.00 per kilogram, ZA fertilizer IDR 1,400.00 per kilogram and NPK fertilizer IDR 2,300.00 per kilogram. The results (Chanifah et al. (2020) indicate that government policy on output, input, and output-input of domestic soybean farming protects domestic soybeans and benefits farmers to get a higher surplus. Government policy in the form of subsidies is expected to strengthen the competitiveness of domestic soybeans.

Input Policy on Soybean Farming. Government policy on inputs can take the form of subsidies and import restrictions to protect producers. Indicators of input transfer (IT), factor transfer (FT), and the national input protection coefficient (NPCI) can be used to determine the existence of government incentives for inputs. Input Transfer (IT) depicts the amount transferred to soybean growing in Jeneponto Regency following the implementation of a government policy on tradable inputs. The difference between private and societal tradable input costs is the input transfer value. If the IT value is greater than zero, the social price of foreign inputs rises, and producers pay more. The IT value obtained by soybean farmers in Tamalatea District is negative Rp 184,240.32, indicating that producers do not pay in full for foreign inputs.

The nominal protection coefficient input (NPCI) is the ratio of the difference between the private and social prices of tradable inputs. The NPCI<1 rating suggests that government policies relating to tradable inputs have been successful in protecting farmers as tradable input consumers. The nominal input protection coefficient (NPC<I) is a ratio of private and social tradable input costs that serves as an indicator of government protection against domestic input prices. The NPCI less than one (NPCI<1) obtained from the results is 0.61104. Thus, government policy protects foreign inputs, and producers obtain subsidies on foreign inputs, allowing them to acquire at lower prices. Soybean farmers received a 61.104 percent lower input price than they should have paid (condition there is no policy).

According to the findings of Kata et al. (2020) research in Tebo Regency, the NPCI value is 0.90 or less than one (NPCI < 1), indicating that there is a subsidy policy for tradable inputs such that the price of tradable inputs is 10% lower in the domestic market than prices in the world market, benefiting farmers. In Tebo Regency, the transfer value of soybean cultivation variables is Rp - 401,753.84. This demonstrates that there is a government policy that is more pro-farmer, since farmers can save Rp 401,753.84 in non-tradable input costs for which they should be compensated. Soybean cultivation has an NPCI < 1 rating of 0.87 in Grobogan District, meaning that farmers pay a tradable input factor value of just 87 percent of their social value, or 13 percent less. The government's policy on tradable inputs is either an incentive or a subsidy, particularly for fertilizer inputs; however, the incentive value is very low. Farmers benefit considerably from this approach since they pay less for tradable inputs than they should (Chanifah et al. 2020).

The Transfer Factor (TF) measures the difference in non-tradable input costs at private and societal pricing. Factor transfer is the gap between private and societal prices paid by producers in exchange for non-tradable factors of production. A value of TF greater than zero indicates that there is a transfer from farmers to producers of non-tradable inputs or the government, whereas a value of TF less than zero indicates that there is no transfer from farmers to producers of non-tradable inputs. The transfer factor value of soybean cultivation is positive, indicating a transfer of Rp 14,365.87 per hectare per planting season from farmers to non-tradable input producers.

Output Policy on Soybean Farming. The government's policy on soybean commodities is known as output policy. Output transfer shows the amount of transfer received by farmers and consumers of soybean commodities. The output transfer value in soybean farming is -2,099,993.19. This value shows that there is a transfer to soybean consumers of Rp 2,099,993.19 per hectare per planting season, due to the difference in actual prices with prices that should be received. This indicates that there is no consumer incentive to producers, so the price paid by consumers is lower than it should be or there is a transfer of output from producers to consumers. In other words, no output subsidy causes social prices to be higher than private prices. This condition results in smaller actual revenues obtained by farmers than social revenues. It can also be

interpreted that the actual price of soybeans received by farmers is lower than the social price that should be received so that the surplus of soybean farmers decreases and the surplus of soybean consumers increases.

Coefficient of nominal protection the output ratio represents the difference between private and societal pricing. If NPCO > 1, domestic prices are higher than import prices, and then government measures have been successful in protecting agriculture. The NPCO value indicates the extent to which the government is protected from output. The derived NPCO value is 0.7824 (NPCO < 1), indicating that the domestic price is lower than the global price. This also suggests that government measures have been ineffective, resulting in lower farmer incomes. Farmers do not receive incentives to boost production since they only receive 78.24 percent of the correct price for soybeans.

The NPCO coefficient value for soybean cultivation on semi-technical land in Sumenep Regency is 1.5508, indicating that farmers receive a price that is 55.08% higher than the world price. The high price of soybeans is due to the fact that the quality is superior to imported soybeans, and farmers sell soybeans for home consumption (Ratna et al. 2013). The transfer value of soybean farming output in Tebo Regency is 359 933.66 positive value. The NPCO value is an indication of output transfer. In the analysis of agriculture policy in Tebo Regency, an NPCO value of 1.04 was achieved. The policy implemented by the government will be protective if the NPCO value is > 1, which means that the government increases output prices in the domestic market beyond its social pricing by 4 percent (Kata et al. 2020). Soybean cultivation in Grobogan Regency has a positive NPCO value of 1.01, indicating that farmers obtain a better private price for their soybeans than the social price. Farmers receive private soybean prices that are 0.1 percent higher than international soybean prices. This demonstrates that the government is preserving homegrown soybeans at the farmer level, albeit at a very low level (Chanifah et al. 2020).

Input-Output Policy on Soybean Farming. During the period 1992 – 2018 (26 years), the highest soybean production in Indonesia was achieved in 1992 at 1.87 million tons, after 1992 production decreased to only 985,598 tons in 2018. The development of soybean consumption in the period 1992 - 2016 (24 years) showed fluctuating development with an average of 2,405,583 tons with an increasing growth rate of 0.97% per year. On the other hand, domestic soybean production in the same period showed a declining growth rate of 1.82% per year, resulting in a shortage of domestic soybean needs.

To meet the shortage of soybean needs, soybean imports are carried out from various soybean producing countries in the world. Soybean imports are increasing in line with the increasing demand for soybeans by 3,144,437 tons in 2017. To meet domestic soybean needs (self-sufficiency) while reducing the rate of soybean imports, a soybean development strategy is needed through: a) expansion of soybean planting areas; b) determination of production center areas outside Java; c) seeding; d) development of innovation technologies; e) policies on determining COGS and tariffs on soybean imports; f) stabilization of soybean prices; and g) local soybean-based industry support. If these efforts are not made by the government, then in the future Indonesian people may no longer find tempeh and tofu from Indonesian soybeans (Triastono et al. 2018).

Input and output policies are hybrids of input and output policies. The Effective Protection Coefficient (EPC), Subsidy Ratio Value to Producers (SRP), Profit Coefficient (PC), and Net Transfer (NT) are indicators of the influence of input output policy. Net transfer (NT) is the total amount of net transfer accumulated from output and input transfers. Net transfer (NT) is the difference between private and societal profit (assuming perfect competition) that describes the impact of government policies on income, whether beneficial or detrimental. The NT value obtained is negative at Rp 1,930,118.73 which shows that government policy does not provide incentives to increase production. The net transfer value in the study in Tebo Regency was IDR 855,462.17 or positive value. This means that farmers get additional surplus profits caused by government policies on soybean farming inputs (Kata et al. 2020).

Profitability Coefficient (PC) is a ratio that calculates the influence of transfers, both output and input transfers, on farm profits. The effect of overall policy is indicated by the coefficient of profit, which is

determined by the ratio of private to social acceptability and causes private advantages to diverge from social profits. The PC value obtained by soybean farmers is 0.7488 which indicates that the profit obtained by farmers is only 74.88 percent and loses 25.12 percent of the profit that should be. Soybean farming in Tebo Regency has a PC value greater than one, which is 1.69. This means that the overall government policy provides benefits to soybean farmers. Private profits are 1.69 times higher than social profits (Kata et al. 2020).

The effectivity policy coefficient (EPC) measures the extent of simultaneous protection of tradable outputs and inputs. If the EPC value is more than one, the policy remains protective. The higher the EPC value, the greater the government's protection against domestic commodities. Soybean cultivation has an EPC score of 0.7912, indicating that government policy is ineffective in protecting soybean farmers. The resulting EPC value demonstrates that output and input subsidy programs are hindering (ineffective) and do not create incentives for farmers to produce. In Tebo Regency, soybean farming has a positive EPC value of 1.06, this means that government policies in input-output protection have been able to protect soybean farmers, so that farmers receive 6 percent higher (Kata et al. 2020).

The Subsidy Ratio for Producers (SRP) is a metric that shows the proportion of revenue necessary at social prices if subsidies or taxes are used instead of policies. A negative SRP value shows that current government policies lead producers to incur production costs that are greater than the opportunity cost to produce, and vice versa if the SRP value is positive. Soybean cultivation has a negative SRP value of -0.20001. This value often indicates that government input and output policies are damaging to farmers, as farmers are compelled to spend 20 percent more than the potential cost of producing and do not offer farmers with incentives to produce.

The SRP value in the Sumenep Regency research is 0.10 positive, indicating that government policy causes soybean producers to pay less on production expenses than on balance costs. Due to market distortions, ledelai growers' revenue increased by one-tenth. The SRP value for soybean growing in Sumenep Regency is 0.4788, which suggests that government measures can cut production costs by 48% for every kilogram produced. The reduction in production costs is due to a reduction in the utilization of tradable input costs (Ratna et al. 2013). Soybean cultivation has an SRP value of 0.04 in Grobogan Regency, indicating that government policies promote and benefit domestic soybean growers. The SRP value is a metric that indicates the proportion of revenue necessary at social prices if subsidies or taxes are used instead of policies. The SRP value is calculated by dividing net transfers by social price receipts (Chanifah et al. 2020).

CONCLUSIONS

The competitiveness of soybean farming in Tamalatea District, Jeneponto Regency can be categorized as strong competitiveness, because it has competitive advantages and comparative advantages, so it is financially and economically efficient. Government policies that are protective of tradable inputs have a positive impact on soybean farming, soybean farmers pay inputs cheaper than they should. Government protection policies against tradable output in soybean farming have not been effective, soybean farmers get output prices lower than the price they should, so that farmers' revenues are reduced. Government policy on simultaneous tradable input-output has not been effective in protecting soybean farming, so it has not been able to provide incentives for increased production. Policies on output and input subsidies are inhibiting (ineffective) and tend to harm farmers, because farmers are required to pay higher than the opportunity cost to produce.

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