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ANALYSIS OF COMPETITIVENESS AND SUSTAINABILITY OF CASSAVA COMMODITY IN LAMPUNG TIMUR REGENCY

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Abstract

The purpose of the study was to determine the competitive and comparative advantages and sustainability of cassava farming in East Lampung Regency. The population of cassava farmers is 1,100 farmers using the Slovin formula, so a sample of 92 farmers is obtained. Sampling was done by purposive sampling technique. Data analysis used PAM (Policy Analysis Matrix) analysis. The results of the study were the PCR coefficient value of 0.3397 and the DRCR coefficient value of 0.1216. The coefficient value < 1 indicates that cassava farming in East Lampung Regency has a competitive advantage and a comparative advantage. The government needs to set a Regional Minimum Price (HMR) policy of Rp. 1,150/kg which aims to improve the welfare of farmers

Keyword: Cassava; Competitiveness; Comparative and Competitive; Policy.

1. Introduction

The role of the agricultural sector in national development is very strategic [1]. One of the sub-sectors that support the agricultural

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sector is the food crops sub-sector. The role of the food crop sub-sector is urgently needed to realize national food security, regional development, reduce poverty, reduce unemployment and increase foreign exchange, as well as stimulate upstream-downstream industry growth that contributes to national economic growth [2]. One of the food crops whose productivity must be increased to meet national food demand is cassava [3].

Cassava is a root crop derived from food plants that grow in the tropics and has the ability to adapt to the environment, but is sensitive to low temperatures [4]. In addition, cassava is quite potential to be developed and is a superior strategic food ingredient [5] Indonesia is one of the main producers and exporters of cassava in the world [6]. Indonesia as a cassava producing country has been included in the top five from 2004 to 2019 [7]. Therefore, cassava contributes to Indonesia's foreign exchange through exports every year [8]. The agricultural sector can increase product competitiveness in domestic and international markets, this can be presented in Table 1.

Table 1. Data on Export and Import Volume of Cassava Trade in Indonesia 2014-2018

Year	Eksport (Kg)	Import (Kg)
2014	78.963.479	-
2015	6.014.821	4.211.741
2016	37.783.848	12.540.190
2017	8.614.662	3.299.911
2018	1.532.532	307.881

Source: UN Comtrade processed 2019

Table 1 shows that the volume of exports is greater than the volume of imports of cassava each year in Indonesia. This is because the price of cassava is good so that it stimulates domestic cassava production and in 2014 did not import because domestic needs have been met. In 2016, high production yields and at the same time there was an import in the form of starch so that the domestic price of cassava decreased and most of the cassava farmers felt at a loss. In the following year the volume of exports decreased and imports were carried out even though the volume of imports was not more than the volume of exports. This can happen because production in that year also experienced a decline due to the decline in cassava prices due to imports in the previous year. On the other hand, the need for cassava for tapioca factories as the main raw material is not met [9] so that some tapioca factories do not do the milling and even temporarily close their production.

Competitiveness can be achieved by increasing farm productivity [1], [10]. In addition, competitiveness can be achieved by using production

factors that are carried out efficiently to get maximum production results and low production costs [11]. In addition, the government's policy on subsidized fertilizers is a stimulus to increase production for cassava farmers. The government's involvement in realizing the comparative advantage and competitive advantage of commodities aims to protect farmers (producers) [12], and help farmers to increase the competitiveness of cassava. Lampung Province as a cassava producer which acts as a national supplier of cassava and exports, this can be seen from the area and high cassava production compared to other provinces [16].

Agricultural development in Indonesia faces the challenges of modern times so that the concept of sustainable agriculture is needed. Agricultural development is the development of a comprehensive agricultural system [13]. A good agricultural system can minimize the use of excessive inputs such as seeds/seeds, inorganic fertilizers and inorganic pesticides [14]. The food system can integrate ecological, economic and social aspects [15].

As a national cassava production center, cassava production in Lampung Province contributes 34.56% to national production [16]. Where one of the districts which is the center of cassava production in Lampung Province is East Lampung Regency with a total of 909,794 tons or 18.00% of the total cassava production in Lampung Province which is ranked third [17]. Although East Lampung Regency is not currently the main center in Lampung Province, East Lampung has sufficient prospects to develop cassava.

Marga Tiga Subdistrict is the center of cassava production in East Lampung Regency based on the harvest area of 7,532 hectares, total production of 206.794 tons, and productivity of 274.55 ku/hectare. In Marga Tiga Subdistrict, when the price of cassava increases, the number of farmers engaged in cassava farming increases. However, if the price of cassava falls, most of the farmers do corn farming. Apart from that, farmers are also implementing an intercropping system of corn with cassava so that farmers continue to earn continuous income. From this, the purpose of this study was to analyze the competitiveness of cassava commodities in East Lampung Regency.

2. Literature review

2.1. Competitiveness Concept

Competitiveness is the ability of producers to produce commodities that are in accordance with consumer demand under conditions of farming technology, economic environment and existing government policies [18]. If the production costs that occur in the international market are low, then producers can maintain sustainability in producing and marketing commodities [19].

The approach used to measure the competitiveness of a commodity is the level of profit and efficiency of operating the commodity [20]. Profit indicators consist of private profits and social benefits [1]. In addition, the efficiency indicators of working with commodities are comparative and competitive advantages [21].

Competitiveness covers a broader aspect, not only at the micro level of the company, but also includes aspects outside the company such as the business environment which is beyond the control of the company [22]. The World Economic Forum (WEF), an institution that regularly publishes the "Global Competitiveness Report", which defines national competitiveness as the ability of the national economy to achieve high and sustainable economic growth while remaining open to domestic and international competition [23]. According to [24]. to measure the level of regional competitiveness using three indicators, namely regional productivity, employment opportunities, and living standards.

The economic status of a country is determined by its international competitiveness and the nine factors have varying weights as a country moves from the underdeveloped stage to the developing stage, then to the semi-advanced stage and finally to the advanced stage. Indicators of competitive advantage are productive capital, human capital, institutional social capital, cultural capital, infrastructure capital, and knowledge/creative capital [24].

2.2. Comparative Advantage and Competitive Advantage

Comparative advantage is dynamic because it is influenced by changes in natural resources, changes in biological factors, changes in input prices, changes in technology, and transportation costs [25]. Commodities that have a comparative advantage can be said to have achieved economic efficiency related to economic feasibility.

Comparative advantage is a concept applied by a country to compare various domestic production and trade activities with world trade [26]. Production costs are expressed in social values and commodity prices are measured at the social price level [27]. The indicator of comparative advantage is used to determine whether a country has an economic advantage to expand the production and trade of a commodity [28].

Competitive advantage is supplying goods and services at the time, place and form desired by consumers [29]. These goods and services are marketed in both domestic and international markets at the same or better prices than those offered by competitors. Competitive advantage as an indicator of the efficiency of a commodity privately which is based on the market price of the commodity or the value of money prevailing in a country [30].

Competitive advantage can be achieved and maintained by increasing the productivity of the resources used [31]. If a commodity does not have a competitive advantage, then the commodity-producing country will experience market distortion or there are obstacles that harm producers [25].

Measuring competitive advantage is approached by calculating private profits [32]. Private profit is an indicator of competitiveness based on technology, output value, input costs and transfer of existing policies [12]. Competitive advantage is an indicator to see whether a country will successfully compete in the international market for a commodity [28].

3. Research methods

The location of the research was carried out in Marga Tiga District, East Lampung Regency with consideration as a center for cassava production. Research time starts from October to November 2020. The number of samples was taken non-probability with purposive sampling obtained a total sample of 92 farmers based on the slovin formula [33].

Research data consists of primary data and secondary data. Primary data were obtained from cassava farmer respondents by interview technique using a questionnaire. Secondary data is obtained from related institutions or agencies, reports, publications, and other literature related to research.

Data analysis in the form of PAM (Policy Analysis Matrix) method Table 2. With this approach, we can determine the competitiveness and impact of government policies on inputs and outputs of cassava commodities.

Table 2. Policy Analysis Matrix (PAM)

PAMComponent	Penerimaan (Revenue)	Business Cost		Profit
		Input Tradeable	Domestic Factor	
Private Price	A	B	C	D
Social Pricing	E	F	G	H
Divergence Effect	I	J	K	L

Source: [25].

Analysis of Private Profits and Social Benefits

1) Private profit : D = A-(B+C)

The value of D> 0 which means that the commodity is profitable, the value of D < 0 otherwise.

2) Social benefits : H = E-(F+G)

The value of H> 0 which means that the commodity is able to compete with intervention from the government, the value of H < 0 otherwise.

Competitive Advantage (PCR) and Comparative (DRC) Analysis

1) Private Cost Ratio (PCR) = C/(A-B)

PCR value < 1 which means there is a competitive advantage.

2) Domestic Resource Cost Ratio (DRCR) = G/(E-F)

DRCR value < 1 which means that there is a comparative advantage.

Government Policy Impact Analysis

Government policy on output

1) Output Transfer (OT) = A-E

The value of OT> 0 which means there is a transfer from the consumer to the producer.

2) Nominal Protection Coefficient on Output (NPCO) = A/E

NPOC value> 1 which means that there is a level of government concern for output.

Government policy on input

1) Input Transfer (IT) = B-F,

The value of IT is negative, which means that there is a government policy that provides subsidies for Tradeable inputs.

2) Nominal Protection Coefficient on Tradeable Input (NPCI) = B/F

NPCI value < 1 which means that there is a subsidy policy for Tradeable inputs.

3) Transfer Factor (FT) = C–G

The value of FT> 0 which means that there is a transfer from producer farmers to domestic factor producers.

Government policy on input-output

1) Effective Protection Coefficient (EPC) = (A–B)/(E–F),

EPC value> 1 which means that private profits are greater than without government policy

2) NetTransfer (NT) = D–H

The value of NT> 0 which means that there is an additional producer surplus caused by government policies given to inputs and outputs.

3) Profitability Coefficient(PC) = D/H

PC value < 1, which means that government policies make the profits received by producers smaller when compared to no policy

4) Subsidy Ratio to Producen (SRP) = L/E SRP value> 1, which means that the current government policy eases the burden on the

costs incurred by producers below the social costs that should be incurred.

4. Results and discussion

4.1. Private Pricing and Social Pricing

Private pricing and output social pricing, the private price is the price faced by farmers in the transaction of selling the output (cassava) while the social price is the world price or international price which represents the cost of social offsets.

Table 3. Private and social prices of cassava output in East Lampung Regency

Component	Description	Information
Price f.o.b Thai cassava with starch content 20-25% (US$/ton)[a]	501.20	(FAO, 2018)
Shipping and insurance (US$/ton)[b]	52.63	(http://bctemas.beacukai.go.id)
Price c.i.f (US$/ton)[c]	553.83	
Exchange rate (Rp./US$)[x]	14,690.00	(www.bi.go.id)
c.i.f Exchange rate (Rp/kg)[d]	8,135.76	
Unloading/loading, warehouse, shrinkage[e]	244.07	Permenhub No. 152 Year 2016 amounted to 3%
Transportation costs to the province (Rp/kg)[f]	10.00	
Value before processing (Rp/kg)[g]	8,389.84	
Processing conversion factor[y]	0.20	20 % (SKKNI Tapioca Processing)
Starch Price (Rp/kg)[i]	1,677.97	
Conversion factor	0.75	
Import parity prices at wholesalers (Rp/kg)[l]	1,258.48	
Distribution costs to farmer level (Rp/kg)[m]	55.00	
Import parity price at farm level (Rp/kg)[n]	1,203.48	

Source: Primary data (processed), 2020

Private pricing and social pricing input, determining private prices and social prices is needed to analyze competitiveness. The private price is the price faced by farmers in the transaction while the social price is the world price or international price. Private and social prices of cassava inputs are presented in Table 4.

Table 4. Private and social prices of cassava inputs in East Lampung Regency

Component	Private Price (Rp.)	Social Pricing (Rp.)	Information
Seeds	14.553,26/bundle	14.553,26/bundle	The social price of seeds is the same as the private price because the procurement of cassava seeds is obtained from local nurseries [34].
Fertilizer			
- Urea Fertilizer	1.956,67/kg	3.777,21/kg	Harga sosial pupuk urea, pupuk NPK, dan pupuk SP 36 diperoleh dari harga CIF pupuk (*Commodity Price Data*)
- NPK Fertilizer	2.866,67/kg	4.707,54/kg	
- TSP/SP 36 Fertilizer	2.693,33/kg	4.527,23/kg	
Pesticide	-	-	The social price of seeds is the same as the private price because the procurement of cassava seeds is obtained from local nurseries [35].
Equipment	3.000.000,00/ha/season	3.000.000,00/ha/season	Social price based on actual land rent [36-37].
Peralatan	168.293,46	168.293,46	According to [34] social pricing of equipment based on the actual depreciation value of the equipment.
Labor	65.759,40	65.759,40	Labor is not traded internationally, so the social price of labor is the same as the private price prevailing in the study area [38].
Capital (Interest Rate)	6% / year	8,07% / year	Capital is the interest rate in the research area based on credit loans or financing to MSMEs such as People's Business Credit [39].

Source: Primary data (processed), 2020

4.2. Matrix Analisis Policy Analysis Matrix (PAM)

Policy Analysis Matrix (PAM) is used to analyze the financial and economic benefits of cassava competitiveness. The results of the PAM analysis are presented in Table 5.

Table 5. Analysis of PAM for Cassava Farming in East Lampung Regency

PAM Component	Income (Revenue)	Farming Cost		Profit
		Tradeable Input	Domestic Factor	
Private	15.062.883,95	2.086.172,03	4.408.486,31	8.568.225,61
Social	23.013.642,15	3.126.374,42	4.486.686,20	15.400.581,53
Divergence Effect	-7.950.758,19	-1.040.202,39	-78.199,89	-6.832.355,92

Source: Primary data (processed), 2020

Cassava farming is financially and economically profitable (Table 5). The financial profit of cassava farming is Rp. 8,568,225,61/ha/season while economically it is Rp. 15,400,581.53/ha/season. The difference in the value of financial benefits and economic benefits causes a negative divergence effect of Rp. -6,832,355.92 which means that farmers' profits are smaller which should, in line with research [10] financially and economically cassava farming is profitable, this is reinforced by research on the competitiveness of cassava in other areas [10]; [4]; [41].

Competitive advantage (PCR) and comparative advantage (DRC)Competitive advantage is considered in the economic aspect [42]. Competitive and comparative advantages are low due to a decrease in output prices [1]. Competitive advantage looks at the extent to which farming finances domestic factors at private prices. Competitive advantage reflects the level of efficiency in the use of domestic resources. Domestic resources can be saved to generate foreign exchange [40].

The PCR value is 0.3397, which means that cassava farming has a competitive advantage. The DRCR coefficient value is 0.2256, which means that cassava farming has a comparative advantage. The value of PCR and DRCR has an impact on commodities that are efficient, competitive, there is no intervention from the government, and there are export opportunities. The results of this study reinforce previous research on the competitiveness of cassava in Indonesia. [40] got the results that the competitiveness of cassava in the international market has a competitive advantage, the Private Cost Ratio (PCR) value in that period is 0.36 or less than one which indicates that Indonesian cassava in that period have a competitive advantage. Then, research [43] cassava in Lampung Province has competitiveness with a PCR value of 0.657 and a DRCR of 0.603. In addition, research [20] shows that cassava has a competitive edge with a PCR value of 0.6089 and a DRCR value of 0.5231. Cassava has great potential with various uses [44]. This competitive advantage can be caused by several factors such as the farming system used, the application of farming technology, and the technical guidance of agricultural extension workers at the research site. The use of inputs in farming also helps increase

profitability [40]. In addition, the wide world market share does not guarantee that the country's commodity of origin has high competitiveness [19].

4.3. Government Policy Analysis

4.3.1. Impact of government policies on inputs

The input policy provided by the government aims to assist farmers in production costs. Farmers experience limitations in their activities so that the input policy becomes a stimulus for farmers to maintain their farming. The impact of the input policy is presented in Table 6.

Table 6. Impact of input policies on cassava competitiveness

Policy Impact	Value
Input Transfer (IT)	(Rp. 1.040.202,39)
Nominal Protection Coefficient on Tradeable Input (NPCI)	0,6673
Factor Transfer (FT),	(Rp. 78.199,89)

Source: Primary data (processed), 2020

Input Transfer (IT) is negative (Rp. 1,040,202.39/ha/season) which means that there is a transfer to cassava farmers after the tradeable input policy of (Rp. 1,040,202,39)/hectare/season. Input policies can support the development of farming, especially cassava. According to [1], stating that Input Transfer is negative indicates the existence of an input subsidy policy. The subsidy policy causes the costs of private tradeable inputs incurred by farmers to be lower than the costs of socially tradeable inputs.

The Nominal Protection Coefficient on Tradeable Input (NPCI) is worth < 1 (one) which means that there is a subsidized fertilizer policy by the government so that it benefits farmers. According to [45] states that the NPCI value is 0.6673 which means there is a net transfer in the form of subsidies to producer farmers. This is evident in the fact that farmers pay lower inputs than similar farmers in other areas. This means that farmers benefit from subsidies on imports because farmers only pay 66.73% of what they should have paid in a more open system.

Factor Transfer (FT) has a negative value (Rp. 78,199.89/ha/season) which means that there is no transfer from farmers to producers of non-tradeable inputs or producers of domestic factors and there is no protection from the government for domestic factor producers, so that domestic factor producers do not earn additional profits. According to [46], states that the transfer value of the factor is negative, which means that the production costs incurred to obtain domestic factors are paid at a lower price than the actual one.

4.3.2. Impact of government policies on output

Output policy is a policy on selling prices of products produced by farmers. Cassava farming is a strategic plant that has not received attention from the government so that the selling price of cassava continues to fluctuate which has an impact on farmers' interest in farming. Farmers continue to do cassava farming even though the selling price is uncertain, even the current condition of the selling price has decreased. The impact of the output policy is presented in Table 7.

Table 7. Impact of output policies on cassava competitiveness

Policy Impact	Value
Output Transfer (OT)	(Rp. 7.950.758,19)
Nominal Protection Coefficient on Tradeable Output (NPCO)	0,6545

Source: Primary data (processed), 2020

Output Transfer (OT) is negative (Rp.7,950,758.19/ha/season) which means that the losses received by cassava farmers per hectare per planting season are the result of differences in social prices with prices that should be received by farmers. Therefore, the income received is smaller than the social income. This is because the social price of cassava at the farmer level is greater than the price that should be received by farmers. Changes in commodity prices depend on climate change [47], where during the rainy season, most farmers harvest. The low price of cassava at the farm level is due to a harvest with poor quality and the entry of imports in the form of starch from cassava producing countries. This is in line with research [10], which states that the OT value in cassava farming is negative (Rp. 3,533,422.87), meaning that farmers' income is lower than it should be, this indicates that some buyers with many sellers so that the sellers switch to price takers.

Nominal Protection Coefficient on Tradeable Output (NPCO), is worth less than 1 (one) of 0.6545, which means that cassava farmers receive a lower price than they should receive or farmers do not receive incentives provided by the government. This is in line with research [45], which states that the NPCO value is 0.91 which indicates that in fact there is no protection for cassava for output. Supposedly, cassava farmers are actually independent farmers, not "relatively disadvantaged" in terms of protection because they do not get protection mechanisms in the form of import tariffs or export incentives.

4.3.3. Impact of government policies on input-output

Input output policy is a policy that is accepted by farmers to assist in farming. The impact of the input-output policy is presented in Table 8.

Table 8. Impact of input output policy on cassava competitiveness

Policy Impact	Value
Net Transfer (NT)	(Rp. 6.832.355,92)
Effective Protection Coefficient (EPC)	0,6525
Profitability Coefficient (PC)	0,5564
Subsidy Ratio to Producen (SRP)	-0,2969

Source: Primary data (processed), 2020

Net Transfer (NT) has a negative value or NT < 0 which is the amount of net transfer after the government policy is (Rp. 6,832,355.92/hectare/season) which means that the government's protection of input and output policies does not provide greater private benefits that farmers should receive. This is in line with research [38], which states that the NT value for farming is negative, this illustrates that government policies on traded production factors as a whole tend to harm farmers.

The Effective Protection Coefficient (EPC) is worth less than 1 (one), namely 0.6525, which means that government protection or protection has not been able to provide added value to the income received by farmers. This policy does not support farmers in developing cassava plants or does not provide real benefits for farmers, in line with research [10] the EPC value in cassava farming <1 is 0.90, meaning that government policies can protect farmers and encourage exports.

Profitability Coefficient (PC) has a value of 1, which is 0.5564 which means that with government policies, the farmers' profits received are smaller, if there is no policy. In other words, the existence of government policies does not stimulate farmers to increase the productivity of cassava plants. This is not in line with research [37], which states that the PC value is positive or > 1, which means that farmers do not lose money but the profits they receive are greater than they should be.

Subsidy Ratio to Producen (SRP) has a negative value of -0.2969 which means that government policies or market distortions have a detrimental impact on cassava farmers. This is not in line with research [48], where the SRP is positive, which means that government policies make farmers spend lower production costs.

4.4. Commodity Sustainability Analysis Cassava

4.4.1. Economic Aspect

Economically, the sustainability of cassava plants is measured by R/C > 1. Cassava plants will be planted by farmers depending on the price and the success of the production [42]. Cassava farming is still profitable for farmers because R/C > 1 but profits have not increased the welfare of cassava farmers. There needs to be an increase in

production with cost efficiency. To keep cassava farmers from continuing to do cassava farming, it is necessary to guarantee the selling price of cassava farmers. Where the majority of farmers are very dependent on cassava farming because cassava farming is the main income of farmers.

This is inseparable from the level of skill and mastery of cultivation technology which will have an impact on the income of cassava farmers [49]. However, unstable prices make the income of cassava farmers decrease, so that welfare decreases. Economic needs that require farmers to immediately sell their products at a low value [50]. Therefore, intervention from the government is needed so that the sustainability of cassava is realized [51]. The sustainability of cassava has an impact on exports so that it can be used as a source of state income in the form of foreign exchange and export taxes, and customs duties [52]. Then, the processing industry can be sustainable [53].

4.4.2. Social Aspect

The success of cassava farming in rural areas indirectly creates jobs for farmers. In the area of the superior product base, it can open up continuous employment opportunities for the community, especially farmers [54]. Farmers in the cassava farming environment are urgently needed to plant and harvest, so that many people can receive the benefits of planting and harvesting. Farm owners prioritize labor from the environment around their farms [55]. This is because food crop commodities have great potential to absorb a large workforce [56].

While cassava farmers are waiting for their crops, farmers can work as farm laborers in other farmers' fields. The role of farmer groups can increase farm productivity [57]. The success of cassava farming can certainly revive existing farmer groups. Group activities become active, friendship is maintained, and there is mutual cooperation between each member of the farmer group. With the active participation of farmer groups, the business unit of processing cassava into products that are ready to be consumed by the community can absorb workers in their environment, thus creating new jobs [58]. The rest of the cassava harvest has its own added value from waste [59], if the waste is managed further, it can increase the income of cassava farmers.

4.4.3. Ecological Aspect

The success of cassava farming can create the ecological balance of a region. This is reflected in cassava plants from leaves to roots which can be useful and do not cause ecological pollution. The rest of the agricultural products (waste) used as feed ingredients must meet 3 aspects, namely quantity, quality, and continuity [56]. According to [60], one of the food plant wastes that has potential as animal feed is cassava. Many remnants of cassava stems are not utilized [61]. With

the role of universities, the leaves and stems can be processed into animal feed. Thus, farmers do not need to burn stems which result in environmental pollution. In addition, farmers reduce inorganic materials and switch to organic materials to maintain soil fertility. The use of organic materials in cassava farming can improve soil conditions [41]. Then, harvested waste, if properly processed and handled, can benefit local farmers.

4.5. Managerial Implication

An alternative policy that can benefit farmers is price policy. The Lampung Provincial Government made a breakthrough to overcome farmers' problems related to the selling price of cassava by holding a coordination meeting with the tapioca entrepreneurs. Lampung Governor Arinal Djunaidi chaired a coordination meeting by producing an agreement on the purchase price of cassava farmers in Lampung Province at a minimum of Rp 900,-/Kg (https://newslampungterkini.com/news/91987)

The output price becomes Rp. 900,-/kg then the price policy shows that the value of NT is reduced from Rp. 6,832,355.92 to Rp. 4,742,072,61 which means that farmers get an additional profit of Rp. 2,090,238.31 (producer surplus) so that this policy can stimulate farmers to increase their production. Profitability Coefficient (PC), the value of PC < 1 which is 0.6921 indicates that with the government policy, the profits received by farmers are better than before the policy. The policy of agreement on the price of cassava between the local government of Lampung Province and tapioca entrepreneurs provides additional benefits for farmers even though it has not provided maximum profits.

To find the ideal level of cassava selling price for farmers by simulating calculations, the output price that is quite profitable for farmers in producing cassava is Rp. 1,150/kg. The selling price of cassava shows that the NT value is positive, which means that farmers get a profit (producer surplus) and the PC value is more than one, which means that the policy can stimulate farmers to increase their production and productivity. Therefore, the price agreement needs to be reviewed with the aim of improving the welfare of cassava farmers. The government needs to set a Regional Minimum Price (HMR) policy of Rp. 1,150/kg, so that the price has legal force.

The government as a policy maker can provide a policy for the Regional Minimum Price (HMR) of cassava in accordance with economic developments. So that the government can provide protection or protection to farmers with a price policy.

5. Conclusion

Cassava farming in East Lampung Regency has a competitive advantage and a comparative advantage. This is based on the PCR and DRCR coefficient values. The PCR coefficient value is 0.3397 and the DRCR coefficient value is 0.1216, where each of these indicators has a value of < 1. The sustainability of cassava farming needs to be considered from the economic, social and ecological aspects that plant cassava as the main crop that aims to maintain the balance of rural areas.

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