Competitiveness analysis and impact of government policy on rice farming with conventional method in rogojampi sub-district banyuwangi regency

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Abstract. Rice is one of the staple food commodities that are the target of food sovereignty in Indonesia. In East Java, Banyuwangi Regency is categorized as the top three largest rice producers in East Java. Development of rice farming in an effort to improve and strengthen national food sovereignty one of them is influenced by the competitiveness of rice farming. It is seen from competitiveness in prevailing market condition without questioning the existence or absence of market distortion, in additional, competitive advantage is indicated by the maximal management of rice farming, and competitiveness in free market conditions without distortion or comparative advantage as shown by the low cost of domestic resources. This research was conducted to determine the competitiveness and impact of government policy on rice farming with the conventional method in Rogojampi Sub-district, Banyuwangi Regency. The analytical method used was the Policy Analysis Matrix (PAM). The results of research show that rice farming using a conventional method in Rogojampi Sub-district of Banyuwangi Regency has competitiveness which is indicated by competitive and comparative advantage in rice farming; and the government policies to input and output tradable give the positive impact to rice farming.

1. Introduction

One of the main targets of the national priority in the food sector for the 2015-2019 period is to keep improving and strengthening food sovereignty by increasing the availability of food sources from domestic production. Rice is one of the staple food commodities that is the target of food sovereignity in Indonesia. The effort to increase rice production is preferrable as it can help increase rice surplus so that food independence can be maintained.

Rice production in 2015 in Indonesia was estimated at 75.40 million tons of dry milled grain and about 51.69% of them were produced in Java. Rice production centers in 2015 were East Java, West Java, Central Java, and South Sulawesi. Each of those four provinces produce 13.15 million tons; 11.37 million tons; 11.30 million tons; 5.47 million tons of dry milled grain respectively [1]. In

East Java Province, in 2015, Banyuwangi Regency was the third of the top five regencies with the highest production of _rice commodity in East Java. The largest rice producing areas in East Java were Jember Regency (1,004,898 tons), Lamongan (935,176 tons), Banyuwangi (860,239 tons), Bojonegoro (831,791 tons), and Ngawi (760,725 tons) [2].

The development of rice farming is an effort to improve and strengthen national food sovereignty. One of the elements that influence this development, is the competitiveness of rice farming, which is indicated by the competitiveness of prevailing market conditions without questioning whether there is a market distortion (competitive advantage), as indicated by the maximum management of rice farming, and the competitiveness in the market conditions of free competition without distortion (comparative advantage) as indicated by the low use of domestic resource costs.

Competitiveness is the power to penetrate the export market to increase export share, as well as the power to stem the entry of commodities from other countries. With the increasingly liberal world trade, competitions among countries will be even tougher, therefore, to be able to win global competition, both in the world market and the domestic market, efforts to increase competitiveness need to be done through interventions of various factors that can affect competitiveness [3].

Government policies on rice farming such as trade protection policies that cover all trade incentives, including quotas, tariffs, and subsidies on production inputs and outputs of rice agribusiness production may cause market distortions, which prevents the occurrence of free competition and can affect the competitiveness of rice farming. Government policy on the input and output of rice agribusiness, and macroeconomic policies is also one of the factors that can affect the development of rice farming in Indonesia. Therefore, in this research which research on the competitiveness analysis and the impact of government policy on rice farming using conventional methods in Rogojampi Sub-district, Banyuwangi Regency was conducted.

2. Research Methods

This research was conducted in Rogojampi Sub-district, Banyuwangi Regency. The area of this research was determined based on a deliberate method (purposive method). The basic consideration of selection of the research location was that the district is the largest producer of rice commodity in Banyuwangi Regency, and farmers who are the sample in this research are conventional method rice farmers in Gladag Village, Rogojampi Sub-district, Banyuwangi Regency.

The analytical method used to analyze competitiveness which includes the competitive advantage and comparative advantage, as well as the impact of government policies on conventional farming methods is the Policy Analysis Matrix (PAM). Policy Analysis Matrix was chosen as it can provide a systematic, factual and accurate description of the data and the reality in the field. The PAM table contains the Receipts, the Costs of Input Tradable and Non-Tradable Inputs, as well as the Benefits, on Private and Social Prices, the difference between Private and Social Prices which shows the Effect of Divergence. The policy analysis matrix table as shown in table 1 [4].

Table 1. Policy Analysis Matrix

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

Sumber : Monke E A and Scott R Pearson, 1989

Table Description :

1. Private Profit (D) : D = A – B – C
2. Social Profit (H) : H = E – F – G
3. Output Transfer (I) : I = A – E

4. Input Transfer (J) : J = B – F
5. Factor Transfer (K) : K = C – G
6. Net Transfer (L) : L = D – H

Rice farming competitiveness The conventional method in PAM analysis can be seen from its competitive advantage and comparative advantage. Comparative advantage in rice farming can be measured by using Domestic Resource Cost (DRC) Ratio, and competitive advantage in rice farming, can be measured by using the Private Cost Ratio (PCR), with the formulation as:

$$DRC = \frac{\text{Social Input Non - Tradable Costs}}{(\text{Social Revenue - Social Input Tradable Costs})} = \frac{G}{(E - F)} \quad (1)$$

$$PCR = \frac{\text{Private Input Non - Tradable Costs}}{(\text{Private Revenue - Private Input Tradable Costs})} = \frac{C}{(A - B)} \quad (2)$$

The Impact of Government Policy in the Policy Analysis Matrix can be seen from the indicators, namely: the impact of government policy on output as shown by the Nominal Protection Coefficient Output (NPCO) value. The impact of government policy on tradable input as indicated by the Nominal Protection Coefficient Input (NPCI) value, and the impact of government policies on inputs and outputs which can be revealed by using Net Policy Transfer (NPT) indicators, Effective Protection Coefficient (EPC), Profit Coefficient (PC), and Subsidy Ratio to Producers (SRP). The formulations of these indicators are as follows [5]:

$$NPCO = \frac{\text{Private Revenue}}{\text{Social Revenue}} = \frac{A}{E} \quad (3)$$

$$NPCI = \frac{\text{Private Input Tradable Costs}}{\text{Sosial Input Tradable Costs}} = \frac{B}{F} \quad (4)$$

$$NPT = \text{Private Profit (D)} - \text{Social Profit (H)} \quad (5)$$

$$EPC = \frac{(\text{Private Revenue - Private Input Tradable Costs})}{(\text{Social Revenue - Social Input Tradable Cost})} = \frac{(A - B)}{(E - F)} \quad (6)$$

$$PC = \frac{\text{Private Profit}}{\text{Social Profit}} = \frac{D}{H} \quad (7)$$

$$SRP = \frac{\text{Net Transfer}}{\text{Social Revenue}} = \frac{L}{E} \quad (8)$$

3. Results and Discussion

The Policy Analysis Matrix (PAM) approach analyzes the Revenue, Costs, and Profit of rice farming at private prices and social prices. Private prices are prices that reflect values influenced by policies and market failures, or prices received by farmers after government intervention in the form of government policies. Social prices are prices that farmers should receive without government policies and market failures. Revenue and the cost of the private price in the first line in the policy analysis matrix reflect private profitability and competitive advantage in rice farming, which is seen from the value of revenue, tradable input costs and domestic factors and profit based on private prices. The

second line of policy analysis matrix shows social profitability and comparative advantage shown from revenue value, tradable input, non-tradable input and profit in social prices.

3.1 Competitiveness of Rice Farming with Conventional Methods in Rogojampi Sub-district Banyuwangi Regency

The competitiveness of a product can be measured in two ways, namely comparative advantage and competitive advantage. In the policy analysis matrix the value of competitive advantage can be seen from the coefficient of PCR (Private Cost Ratio) and the value of comparative advantage can be seen from the coefficient of the DRC (Domestic Resource Cost) value.

3.1.1 Competitive Advantages of Rice Farming with Conventional Methods in Rogojampi Sub-district Banyuwangi Regency

The competitive advantage of rice farming in conventional methods refers to the superiority of rice farming which relates to the maximum management of rice farming. Competitive advantage measures the competitiveness in rice farming based on the prices received by producers (private prices) or prices on prevailing market conditions without questioning whether there are market distortions.

The competitive advantage of rice farming in Gladag Village, Rogojampi Sub-district, Banyuwangi Regency can be seen from the value of the Private Cost Ratio (PCR) coefficient in the policy analysis matrix table. PCR is the ratio between the cost of domestic factors and the value added output of the cost of domestic factors that are traded at the price at the producer level. The PCR value shows that if PCR is smaller than one, it means that rice farming with conventional methods in Rogogampi Sub-district, Banyuwangi Regency has a competitive advantage. The results of PAM analysis that shows the value of competitive advantage of conventional methods of rice farming in Gladag Village, Rogojampi Sub-district, Banyuwangi Regency are shown in table 2.

Table 2. Results of Policy Analysis Matrix and Value of Private Cost Ratio (PCR) of Rice Farming with Conventional Methods in Gladag Village Rogojampi Sub-district Banyuwangi Regency Planting Season December 2017- March 2018 (per Hectare)

	Output	Tradable Input	Domestic Factor	Profit
Private	25,589,667	2,019,620	16,215,622	7,354,425
Social	24,045,094	3,357,949	14,938,736	5,748,409
Divergence	1,544,573	-1,338,329	1,276,885	1,606,016
		PCR =	0.688	

Source: Primary and Secondary Data Processed in 2018

The results of PAM analysis on the conventional methods of rice farming in Gladag Village, Rogojampi Sub-district, Banyuwangi Regency showed that the PCR value of rice farming was smaller than one, this value showed that the conventional farming method in Gladag Village, Rogojampi Sub-district, Banyuwangi Regency had a competitive advantage. The PCR value obtained from the PAM analysis is 0.688, it means that to produce one unit of value-added output in conventional methods of rice farming in Gladag Village, Rogojampi Sub-district, Banyuwangi Regency at a private price, less than one unit of domestic resource costs or domestic resource costs were required amounting to 0.688. In other words, in order to produce one unit added value (1 US $) or to get an additional US $ 1 profit with the official exchange rate (IDR / $) in December 2017 to March 2018 Rp 13,569 is needed IDR 9,335.47 domestic input costs in conventional methods of rice farming in Gladag Village, Rogojampi Sub-district, Banyuwangi Regency. This PCR value also shows that the amount of costs that must be sacrificed due to the use of resources at market prices is lower than the profit obtained by the producer for each one-unit currency (IDR).

The competitive advantage of conventional methods of rice farming in Gladag Village, Rogojampi Sub-district was due to the quite efficient use of domestic factors in rice farming with

conventional methods. Besides the rice prices received by the rice farmers were suffient to cover the production costs and to generate profit for farmers. Conventional method of rice farming in Gladag Village, Rogojampi Sub-district, Banyuwangi Regency using domestic factors, among others, namely organic fertilizers such as manure, liquid organic fertilizer, labor in rice farming that includes land processing labor, extraction power from hatcheries or in Banyuwangi Regency, which is known as "*daud*", the planting workforce carried out by female workers, and the maintenance workforce in rice farming carried out by the "*mager sari*" workforce, harvesting activities, irrigation fees for HIPPA, depreciation equipment, capital, and land.

Maintenance work in rice farming in Rogojampi Sub-district, were generally carried out by workers outside the family called the "*mager sari"*. *Mager Sari* refers to a workforce given the task by the owner of the rice farming land to carry out maintenance activities on rice farming from hatchery to the rice plants during the harvest period. The tasks of *Mager Sari* workforce include hatchery, hatchery maintenance, trenching in paddy fields, repairing rice fields, fertilizing, controlling pests and plant diseases, weeding or controlling weeds, planting, and channeling irrigation water into the rice fields. Profit sharing between *mager sari* and rice farming landowners, especially in Gladag Village, Rogojampi Sub-District, was 1: 7 from the number of sacks produced at harvest time, or from receipts received by landowners. In the sense, *mager sari* labor received profit sharing in the amount of 1/8 part of the total sacks or receipt of rice farming as the cost of maintenance carried out by the worker of the *mager sari*.

3.1.2 Comparative Advantages of Rice Farming with Conventional Methods in Rogojampi Sub-district Banyuwangi Regency

Comparative advantage measures the competitiveness in rice farming based on social prices or prices on perfect competitive market conditions. Comparative advantage is indicated by the value of DRC (Domestic Resources Cost). DRC is the ratio between the cost of domestic factors and the value added output of the cost of domestic factors traded on social prices. The DRC value shows that if the DRC is smaller than one, it means that the rice farming with conventional methods in Rogojampi Sub-district, Banyuwangi Regency has a comparative advantage. It, means that rice production in Rogojampi Sub-district, Banyuwangi Regency is efficient in terms of domestic resource use, in other words, domestic rice production is economically more efficient and profitable than importing the rice. The results of PAM analysis which shows the value of comparative advantage of rice farming in Rogojampi Sub-district, Banyuwangi Regency are as shown in table 3.

Table 3. Results of Policy Analysis Matrix and Value of Domestic Resources Cost (DRC) of Rice Farming with Conventional Methods in Gladag Village Rogojampi Sub-district Banyuwangi Regency Planting Season December 2017- March 2018 (per Hectare)

	Output	Tradable Input	Domestic Factor	Profit
Private	25,589,667	2,019,620	16,215,622	7,354,425
Social	24,045,094	3,357,949	14,938,736	5,748,409
Divergence	1,544,573	-1,338,329	1,276,885	1,606,016
		DRC =	0.722	

Source: Primary and Secondary Data Processed in 2018

The results of the PAM analysis show that the DRC value of rice farming in Gladag Village, Rogojampi Sub-district, Banyuwangi Regency was smaller than one that is 0.722. This value indicates that the conventional method of rice farming in Rogojampi Sub-district, Banyuwangi Regency has comparative advantages. The DRC value of 0.722 indicates that rice farming in Gladag Village, Rogojampi Sub-district, Banyuwangi Regency is economically efficient in using domestic resources, because to generate foreign exchange of one unit only required domestic factor costs around 0.722 units. In other words, to save one foreign exchange unit (1 US $) with the social price / price of the official exchange rate shadow (SER) (IDR / $) in December 2017 to March 2018 amounting to .

14,763 / US $ required domestic resources 0.722 US $ or IDR 10,661. This DRC value also shows that the cost of producing rice in Rogojampi Sub-district, Banyuwangi Regency is only 72.2% of the import costs. Therefore, if the fulfilment of demand for rice is carried out from domestic production, it will be able to save foreign exchange by 27.8% of the total import costs needed, or will be able to save costs of IDR 4,102.

Comparative advantage in PAM analysis was analyzed using tradable input costs and domestic factors in perfect competitive market conditions (social prices). The components of domestic resource costs in rice farming include organic fertilizer, labor costs, harvesting costs, HIPPA fees, depreciation of equipment, capital, and land costs. The calculation of social prices for domestic factors, tradable inputs and inputs is reflected in the shadow price or based on the estimation of the social opportunity cost. The shadow price was used to adjust to international market prices. For domestic factors that cannot be traded internationally such as labor, capital and land, the shadow price is estimated by various assumptions that have been used in the previous PAM study. In estimating the cost price for the price of rice farming labor was assumed to be untrained labor, therefore the social wage level was calculate based on government policy in the form of the minimum wage level and the conversion used was 0.8 from the actual wage level. The price of the capital interest shadow was obtained from the retail loan interest rate of Bank Rakyat Indonesia (BRI) which was often used as a credit lending institution for farmers, which was 10.75% deducted by the inflation rate of 3.36% so that the value of the shadow interest rate of capital was 7. 39%. Social Price Land was approached with the value of land rent, according to [6], the price of the shadow used was valued by the rent value.

The shadow price for output was rice and the shadow price of tradable input was that of the fertilizer calculated based on the prices on the world market. The calculation of shadow prices for imported products used CIF (Cost Insurance and Freight) prices, and for the exported products FOB (Free on Board) prices were used, the world price is converted in domestic currency (IDR). The price of the shadow of the rupiah exchange rate (shadow exchange rate) was calculated by dividing the rupiah exchange rate with the standard conversion factor (SCF). The calculation resulted in the shadow price of the IDR exchange rate of IDR 14,762.826 / US $. The shadow price of rice was calculated based on CIF prices because in Indonesia rice was an imported product. The price of rice imports at the world level in 2017/2018 was an average of 432.33 US $ / ton, as a result of the calculation of social price adjustments for rice imports, the social price of rice at the farm level was Rp. 4,351.22 / kg. Tradable input in rice farming includes seeds, inorganic fertilizers, and pesticides. The seed shadow price was assumed to be calculated from the actual private price at the research location which is reduced by value added tax by 10%. Price of tradable input of Urea, NPK Phonska, SP-36 and ZA inputs was calculated based on CIF prices, because Urea fertilizer, NPK Phonska, SP-36, and ZA were imported products. The shadow price of tradable pesticide input was assumed to be calculated from the actual private price at the research location which was reduced by the import tariff of 5% and value added tax 10%, and PPh 22 (income tax) by 2.5%. Shadow prices for other domestic factors such as dolomite, harvesting costs, HIPPA irrigation fee, depreciation of equipment were assumed to be the same as the actual price.

3.2 *The Impact of Government Policy on Rice Farming with Conventional Methods in Rogojampi Sub-district Banyuwangi Regency*

3.2.1 Impact of Government Policy on Output

The ratio used to measure the impact of policy output (output transfer) in the PAM analysis was the Nominal Protection Coefficient on Output (NPCO). This ratio shows how much domestic prices (private prices) differ from social prices, if NPCO is greater than one, it means that domestic prices is higher than social prices, which means that rice farming receives protection from the government, and if NPCO is smaller than one, it means that domestic prices are lower than world prices, which means that domestic prices are being protected. Results of PAM analysis show on the value of NPCO in rice farming Conventional methods in Gladag Village, Rogojampi Sub-district, Banyuwangi Regency are as shown in table 4.

Table 4. Output Transfer of Rice Production on Rice Farming with Conventional Methods in Gladag Village Rogojampi Sub-district Banyuwangi Regency Planting Season December 2017- March 2018 (per Hectare)

	Output	NPCO
Private	25,589,667	
Social	24,045,094	1.064
Divergence	1,544,573	

Source: Primary and Secondary Data Processed in 2018

The results of the PAM analysis show that the NPCO value was greater than one, that is 1.064, which means that the conventional method of rice farming in Gladag Village, Rogojampi Sub-district, Banyuwangi Regency received output protection from the government or it can be said that rice farming received positive impacts from government policies and market mechanisms output that applies in 2017/2018. The NPCO value of 1.064 means that the government policy on output, making the output price was 6.4% higher than the social price. The government's policy on the output of rice farming was, among others, the policy of rice import tariffs of IDR 450 / kg in 2017/2018, this rice import tariff policy will be able to protect domestic rice prices from imported rice.

Table 4. shows that the income received by farmers at private prices is greater than the revenue calculated by social prices. The income received by farmers at a private price of IDR. 25,589,667 per Ha. Meanwhile, the income that should be received by farmers or acceptance at social prices amounted to IDR 24,045.094 per Ha, this means that conventional methods of rice farmers in Rogojampi Sub-district, Banyuwangi Regency have been positively affected by the output policies set by the government. The output of the transfer in the conventional method of rice farming in Rogojampi Sub-district, Banyuwangi Regency caused by output protection from government policy was Rp. 1,544,573 per Ha.

3.2.2.Impact of Government Policy on Input Tradable and Domestic Factors

The impact of government policy on tradable input on PAM analysis was indicated by the Nominal Protection coefficient on Input (NPCI) coefficient value. The NPCI ratio shows how much the domestic price of tradable input is different from its social price, if the NPCI is greater than one, the domestic cost of tradable input is more expensive than the input cost at the world price level. In other words the system seems to be taxed by the existing policy, and if the NPCI value is smaller than one, the domestic price of tradable input is lower than the world price, and the system seems to be subsidized by the existing policy. Policy in tradable inputs can be in the forms of trade policies, subsidies and taxes, meanwhile other forms of divergence are caused by market distortions. The results of PAM analysis on conventional method rice farming in Gladag Village, Rogojampi Sub-district, Banyuwangi Regency which shows the value of Nominal Protection Coefficient on Input (NPCI) are as shown in table 5.

Table 5. Transfer of Tradable Input of Rice Production on Rice Farming with Conventional Methods in Gladag Village Rogojampi Sub-district Banyuwangi Regency Planting Season December 2017- March 2018 (per Hectare)

	Output	Tradable Input			
		Seed	Inorganic Fertilizer	Pesticide	Total
Private	25,589,667	519,555	1,136,977	363,088	2,019,620
Social	24,045,094	476,600	2,590,802	299,547	3,357,949
Divergence	1,544,573	51,956	-1,453,825	63,540	-1,338,329
NPCI = 0.601					

Source: Primary and Secondary Data Processed in 2018

The results of PAM analysis in table 5 show the value of NPCI in conventional method rice farming in Gladag Village, Rogojampi Sub-district, Banyuwangi District, less than one, which was 0.601, which means that the domestic price of tradable input is lower than the social price, in other words the conventional method of rice farming in Gladag Village, Rogojampi Sub-district, Banyuwangi Regency received input protection from the government or it can be said that rice farming received a positive impact from government policy on input and input market mechanisms that applied in 2017/2018. The NPCI value of 0.601 means that the government policy on tradable input causes tradable input prices in rice farming to only 60.1% of the social price. Government policies on tradable inputs and market distortions cause private prices of tradable inputs to differ from world prices. The government policy on tradable input in rice farming is one of them is the fertilizer subsidy policy as stipulated in the Minister of Agriculture Regulation No. 47 / Permentan / SR.310 / 12/2017 concerning the Highest Allocation and Retail Prices of Subsidized Fertilizers for Fiscal Year 2017.

3.2.3 Impact of Government Policy on Input Output of Rice Farming with Conventional Methods in Rogojampi Sub-district Banyuwangi Regency

The output and input policies for conventional methods of rice farming in Rogojampi Sub-district, Banyuwangi District as a whole can be seen from indicators such as Effective Protection Coefficient (EPC), Net Protection Transfer (NPT), Profitability Coefficient (PC) and Subsidy Ratio to Producer (SRP). EPC is an indicator to determine the effect of combined transfers caused by policies, both tradable output transfers and tradable input transfers. The NPT describes additional producer surplus or reduced producer surplus caused by government policy. PC is the ratio between private gain and social gain, which shows the influence of government policies that cause private profits to differ from social benefits, while SRP is a comparison between net transfers and output at the world price level. The results of the PAM analysis that shows the impact of government policies on the input output of conventional methods of rice farming in Gladag Village, Rogojampi Sub-district, Banyuwangi Regency are as shown in table 6.

Table 6. Net Protection Transfer (NPT), Profitability Coefficient (PC) and Subsidy Ratio to Producer (SRP) of Rice Farming with Conventional Methods in Gladag Village Rogojampi Sub-district Banyuwangi Regency Planting Season December 2017-March 2018 (per Hectare)

	Output	Tradable Input	Domestic Factor	Profit	PC	SRP	EPC
Private	25,589,667	2,019,620	16,215,622	7,354,425			
Social	24,045,094	3,357,949	14,938,736	5,748,409	1.279	0.067	1.139
Divergence	1,544,573	-1,338,329	1,276,885	1,606,016			

Source: Primary and Secondary Data Processed in 2018

The results of PAM analysis in table 6 show that the value of Net Protection Transfer (NPT) in rice farming in Gladag Village, Rogojampi Sub-district, Banyuwangi Regency is IDR 1,606,016 per Ha, the positive NPT value shows that there was no transfer of surplus from producers or rice farmers to the part others, in other words, government policies had a positive impact on conventional methods of rice farming. The Profitability Coefficient (PC) value of the PAM analysis shows that the value was greater than one, which was 1.279, this shows that government policy on inputs, tradable output and domestic factors in rice farming increased the income of rice producers or farmers by 27.9%, hence the conventional method of rice farming in Gladag Village, Rogojampi Sub-district, Banyuwangi Regency gained a higher profit than rice farmers should receive, or it can be said that government policy on overall input output had a positive impact on conventional methods of rice farming. The value of Subsidy Ratio to Producer (SRP) from the results of the PAM analysis for the conventional rice farming method obtained a positive value, which was equal to 0.067. SRP value of 0.067. It means that the impact of government policy was able to reduce rice production costs by Rp. 0.067 /

Ha, or in other words government policies caused rice farming to receive production costs of 6.7% lower than the costs that should be incurred.

The results of the PAM analysis in table 6 show that the EPC value is greater than one, which is equal to 1.139. EPC values greater than one indicate that there is government protection or protection against inputs and tradable outputs of conventional farming methods or it can be said that the added value received by rice farmers is greater than its social added value. Therefore, farmers do not have to pay transfers to tradable input producers and consumers rice or rice. The EPC value of 1.139 means that the existence of government policy on input and tradable output causes the value added received by rice farmers to be 11.39% higher than without the government policy.

4. Conclusion

The conventional method of rice farming in Rogojampi Sub-district, Banyuwangi Regency has a competitive advantage and comparative advantage which shows that the conventional method of rice farming has competitiveness. Competitive advantage was indicated by the PCR value of 0.688, and the comparative advantage was indicated by the DRC value of 0.722

Government policy towards tradable output has a positive impact on conventional methods of rice farming in Rogojampi Sub-district, Banyuwangi Regency, which was indicated by the NPCO value which was greater than one (1.064). Government policy on tradable input also has a positive impact on conventional methods of rice farming as indicated by the NPCI value which was smaller than one (0.601). Taken together the government policy on tradable input and non-tradable inputs has a positive impact on conventional farming methods, this is indicated by positive NPT and SRP values, and PC values greater which was than one (1.279), and EPC values greater which was than one (1.139).

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