Competitiveness of Indonesian Rice Prices in The International Market

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Abstract. More than 40 countries produce world rice, only six major exporting countries, namely India, Vietnam, Thailand, Pakistan, Myanmar, and the United States. The availability of rice on the world market annually ranges from 39-42 million tons that 40% of it imported by Asian countries, and China imports 6 million tons per year. Retail rice prices in Japan are USD 5.20/kg, Saudi Arabia USD 2.30/kg, and in Africa around USD 1.0 / kg, higher than Indonesia. The price of medium rice offered in the world market ranges from USD 0.34 - USD 0.4 per kg, while the price of special rice is USD 1,000/ton or more. Indonesia has the opportunity to export Basmati and aromatic rice to Japan and Saudi Arabia, which purchased at high prices. This export opportunities driven by reciprocal bilateral trade. Rice export to African countries needs to be explore under bilateral trade agreements. Indonesia has chance to export rice if it is able to consistently achieve a production surplus of at least 2 million tons per year. At the stage of exports, the role of the government needed in the form of tax breaks, quality assurance certification and subsidies for the rice production process.

1 Introduction

Rice is a staple food source of the largest carbohydrate source in the world, ranking second in terms of consumption after wheat. Rice providing more than 20% of the calories consumed worldwide, especially in East and Southeast Asia, the Middle East, the Wes Indies, and Latin America [12]. Total world rice consumption is around 450.63 million tons per year with an average consumption of 53.3 kg/capita [13]. Almost all countries in the world people consume rice with very diverse levels of per capita consumption, ranging from very low (Uzbekistan 4.9 kg/capita; Uganda 4.6 kg/capita; France 4.6 kg/capita) to very high (Laos 165 kg/capita; Bangladesh 173 kg/capita; Vietnam 141 kg/capita). Indonesia consumes 109-119 kg of rice/capita, including in the high rice consumer group, especially since the population is large. Data on world rice consumption from 2015 to 2018 remains stable, because rice is a staple food [9]. Although the quantity of imported rice varies widely, more than 70 countries in the world import rice although the quantity varies widely, ranging from 10,000 tons or less, to more than 1 million tons (China 5-6 million tons; Philippines 2 million tons; Indonesia 1 million tons; Malaysia 1 million tons; Nigeria 1.25 million tons). The availability of rice in the international market ranges from 39 million tons to 42 million tons

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per year [7]. Asian countries play significant roles as suppliers of world rice needs, because around 90% of the world's rice was grown and produce in this region [10]. As many as sixteen countries in the world are rice exporters, six of which are major exporters, namely India, Thailand, Vietnam, Pakistan, the United States, and Uruguay. The other ten exporting countries export between 0.4 million tons to 0.8 million tons per year [8].

The data describes the economic status of world rice, which can be described as follows: (1) Rice is an international trade commodity; (2) Rice is a staple food whose supply in the international market is controlled by six countries and is needed by 70 countries so that if there is a decline in production in the main rice producing countries due to climate anomalies, world rice prices will rise sharply and supplies will become scarce; (3) The supply of rice in the world market is relatively thin, so that if a country that imports large quantities of rice experiences a decline in its national rice production, the world's rice supply will be completely absorbed by that country, such as by China for example; (4) In abnormal climatic conditions or natural disasters occur in several countries, it will result in competition in rice imports so that the opportunity for rice availability in the international market to become scarce; 5) The fairly stable price of rice in the international market is due to the relatively stable production of wheat and corn, which are staple foods in many countries where people also consume rice. The portion of consumption of rice, flour, and corn, as well as other food items in the world is shown in Table 1.

Table 1. Carbohydrate production and demand for food in the world.

Types of Foodstuffs	Harvest Area (million ha)	Production (million tons)	Foodstuffs (million tons)	Information
Paddy/Rice	158.5	685	532	Milled Yield 65%
Corn	159.0	819	114	Mostly used for feed
Wheat	225	687	439	
Millet and Sorghum	75	83	47	
Barley and Rye[1)]	61	170	12	
Oats[1)]	10	23	4	
Potato	19	332	217	
Sweet Potatoes and other Bulbs	13	151	81	

[1)] Barley and rye, oats are sub-tropical crops, a type of wheat
Source: [13]

Types of foodstuffs other than rice, the consumption level for the Indonesian population is very small, so that Indonesia's dependence on the adequacy of national rice production is very large. Although efforts to increase rice production in order to achieve self-sufficiency in rice food have always been a government development program, rice self-sufficiency is still a challenge for Indonesia government. Indonesia's rice exports in 2016-2017 was still very small in number, so they have not been able to position Indonesia as a rice exporting country and have not been recorded in the FAO report [8]. The government has launched a sustainable rice self-sufficiency program, accompanied by the ability to improve the quality and competitiveness of rice to be able to enter the international market, so that by 2024 Indonesia is expected to become the world's food barn [24].

Indonesia's aspiration to become the world's food granary in 2045 means that Indonesia must be able to export rice continuously every year. Some small-scale rice exporting countries (1 million tons or less), namely Cambodia (1.2 million tons); Myanmar (1.1 million tons); Egypt (0.4 million tons); Argentina (0.5 million tons); Brazil (0.6 million tons); Guyana (0.5 million tons); Uruguay (0.9 million tons) [7]. In order to enter the international market, rice from Indonesia must be competitive in terms of price, quality in general, and specific quality for a specific market (niche market).

This paper aims to discuss the competitiveness of Indonesian rice prices in the international market, by comparing rice prices as recorded by FAO in the same reporting year.

2 Methods

Competitiveness analysis was conducted empirically from secondary data obtained from FAO, Patanas (National Farmers Panel) and Agency of Statistical Center. Data were analyzed by quantitative approach and verification method using descriptive analysis.

The writing material is carried out through a study of data and information from various research and study reports, which are published such as books, journal presentation materials from various seminars and conferences, proceedings, and other relevant publications.

3 Results and discussions

3.1 Rice farming analysis

Analysis of rice farming needs to be a concern in looking at overall competitiveness. The high level of rice consumption in Indonesia continues to increase at an average of 3.39 kg/capita/year [3] and needs to be balanced with increased incentives and income for farmers. Farming income is determined by two main components, as cost component and the revenue component. It is necessary to calculate the difference between the cost component and the revenue component. Its feasibility calculated by comparing the value of revenue and costs (R/C ratio). Farming activity is feasible if it has an R/C ratio value of more than 1.

The income analysis carried out in this paper uses data from the Patanas (National Farmers Panel) in several regions in Indonesia (Central Lampung, West Java, West Nusa Tenggara, East Java, and South Sulawesi) in the rainy season and dry season with three different types of land (small land, medium land and large land). The average productivity of rice in the rainy season in the three types of area is 5.65 tons per hectare, higher than the productivity in the dry season, which is 4.64 tons per hectare [20]. Prices show the opposite, the price in the dry season is higher than the price in the rainy season. This is because during the rainy season, grain supply is soaring, causing low prices. Based on the value of the R/C ratio more than one indicated that rice farming activities are consistency profitable. The highest income received is generated on medium land area during the rainy season. The R/C ratio produced in both the dry and rainy seasons in the three different area categories ranged from 2.34 to 2.65. The lowest R/C ratio is on a narrow land area in the dry season, and the highest R/C ratio is produced on a medium land area in the rainy season. This is in line with the research results of [14,15,22] that states that rice farming income is generally profitable with an R/C greater than one. An R/C ratio greater than one indicates the costs offered in farming activities can provide greater rewards.

The cost structure of rice farming in Indonesia consists of costs for production facilities, labor wages, land rent and other costs, with total costs ranging from 37.75 to 42.73 percent of total revenue [20]. A more in-depth study of the cost structure of rice farming in Indonesia,

conducted a study of the cost structure of rice farming during the period 2007-2016 by utilizing the results of previous studies. The largest cost comes from labor wages, ranging from 17 – 58 percent of the total cost of farming, and the lowest cost for production facilities ranges from 5 – 21 percent of the total cost of farming [20]. Labor wages consist of wages for land cultivation (tractors, livestock, humans), nurseries, planting, weeding, fertilization, pest control (plant-disturbing organisms), harvesting and transportation, while costs for production facilities consist of costs for purchasing seeds, inorganic fertilizers (urea, SP36, KCl, ZA), organic fertilizers, insecticides and herbicides.

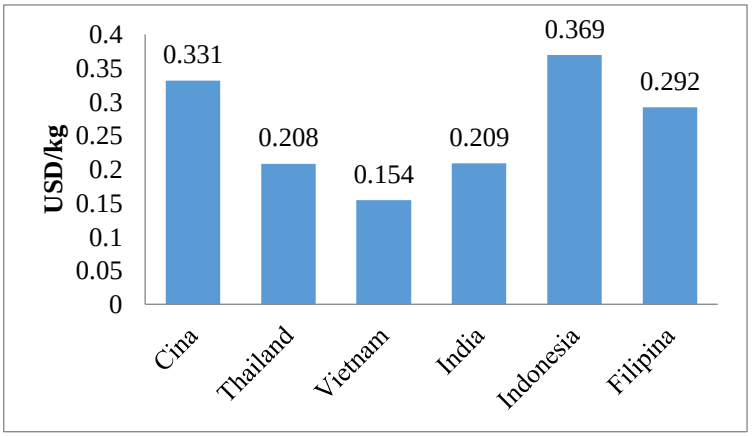

Fig. 1. Comparison of Production Costs per Kilogram of Rice in Several Asian Countries Source: [19]

The competitiveness of Indonesian rice farming can be seen based on the comparison of the cost structure of rice farming in other rice producing countries in Asia (Figure 1). Compared to other countries in Asia, the cost of rice production per kilogram in Indonesia is the highest when compared to the other six major rice-producing countries in the world (China, Philippines, India, Thailand, and Vietnam). This is due to the high cost of labor and land rent in Indonesia when compared to the six countries [19]. The high cost of production is due to farmers not being efficient in using their production inputs [11]. The use of seeds in rice farming in Indonesia is low among other producing countries, namely 16 kg per hectare, the government's recommendation is 25 kg per hectare. For farmers who use the System of Rice Intensification (SRI) planting method and Integrated Crop Management (PTT) technology, the use of seeds ranges from 11-17 kg per hectare [1]. Rice planting in Indonesia is first sown in paddy fields then young seedlings aged 17-25 days are (transplanted) with numbers of seeds between 1-3 stems per hole. Planting seeds with a low number per clump aims to maximize the growth of young plants, the availability of sunlight for rice seedlings will minimize competition between plant seeds in the same clump [25]. In Vietnam, Thailand, and China, farmers grow rice by sowing seeds, the use of seeds is very high, respectively, at 223 kg, 213 kg, and 114 kg per hectare [16]. But planting by sowing seeds saves more on labor costs. Indonesian farmers use more fertilizers than farmers in other countries. [16] stated that the average use of nitrogen and phosphorus fertilizers for each unit area of land carried out by farmers in Indonesia is greater than that of other rice-producing countries, such as China, India, Thailand, Vietnam, and the Philippines. This is related to the narrow business scale so there is a tendency for overly allocated resources to occur. The purchase of fertilizers by farmers tends to be in round scales such as 10 kg, 20 kg, 25 kg, and so on, so that when converted to kg/ha the use of fertilizer will be higher.

In order to increase the competitiveness level of rice farming in Indonesia and reduce farming costs, some strategies can be done: determining the basic price of rice output (in

maintaining rice competitiveness level in the global value chain), subsidizing rice farming inputs such as chemical fertilizers, improvement cultivation technology (seed, agricultural machinery) and improvement irrigation network [2,6,21].

The high use of labor in rice farming in Indonesia compared to other rice-producing countries is due to the lack of use of agricultural machinery in farming activities carried out. The level of mechanization of rice farming in Indonesia has a value of 1.30, smaller than Thailand (1.56) and Vietnam (1.56) and is far behind when compared to China which has a level of agricultural mechanization for rice farming of 4. 10 as shown in Figure 2 [18], Land cultivation activities in the five main rice producing countries in Asia (Vietnam, Thailand, China, India, and the Philippines), the number of workers used is only between 2-8 people per hectare. This is because in general, land processing activities in the five countries already use tractor engines, so the existing workforce is only used to operate tractor engines. In Thailand and Vietnam, all land cultivation activities use a small tractor or big tractor, and plant maintenance uses a mechanical sprayer and harvesters use a combine harvester-thresher [5, 17].

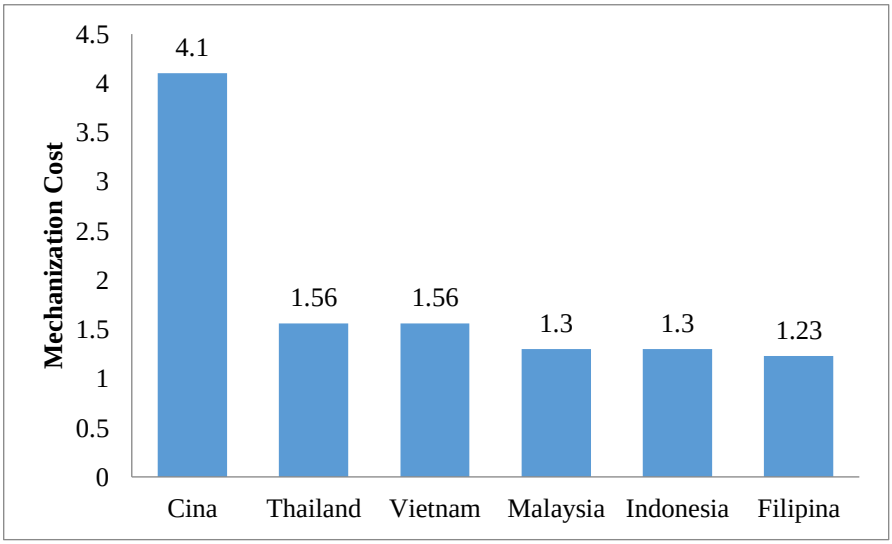

Fig. 2. Level of Agricultural Mechanization in Several Rice Producing Countries Source: [18]

3.2 Domestic rice prices

Domestic rice prices influenced by three factors: rice availability, consumer demand and rice distribution. The availability of rice sourced from rice products in production centers will affect rice prices, the availability of rice stocks in Indonesian Bureau of Logistics (usually called Bulog) also affects rice prices, considering that Bulog can buy and sell rice on a large scale. Consumer demand affects rice prices, especially in the face of Religious Holidays, or consumer panic over the scarcity of rice in the market or changes in consumption patterns (such as in pandemic condition), preferences and food diversification for basic consumer needs [28]. The distribution of rice also affects the price of rice, where the hampered distribution triggers the increase in rice prices. The rice distribution process incurs distribution costs, the distance from the production center to consumers, fuel prices, or disruptions in the distribution process [23]. Government policy factors also have a hand in influencing rice prices, especially rice import and export policies, and Bulog's policy of setting buying and selling prices for rice.

Rice prices are generally stable but continue to change from time to time and tend to increase every year. The dynamics of rice price developments from 2010 to 2017 are presented in Table 2.

Table 2. Average price of rice at the wholesale level in Indonesia.

Year / Month	Average Rice Price Year 2010-2018 (IDR/Kg)								
	2010	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
January	6,702	7,853	8,726	8,835	9,433	10,612	11,614	11,579	12,276
February	6,888	7,612	8,778	8,843	9,531	10,766	11,729	11,571	12,414
March	6,854	7,371	8,687	8,783	9,596	10,987	11,678	11,494	12,299
April	6,761	7,199	8,583	8,711	9,425	10,648	11,449	11,449	12,035
May	6,772	7,233	8,537	8,681	9,414	10,569	11,417	11,465	11,943
June	6,873	7,463	8,554	8,784	9,462	10,679	11,469	11,465	11,907
July	7,026	7,899	8,606	9,018	9,525	10,732	11,498	11,448	11,936
August	7,318	8,152	8,635	9,057	9,525	10,935	11,475	11,411	11,899
September	7,351	8,255	8,624	9,058	9,694	11,055	11,448	11,482	11,900
October	7,391	8,416	8,624	9,108	9,781	11,169	11,433	11,552	11,926
November	7,457	8,496	8.655	9,152	9,924	11,365	11,450	11,665	12,013
December	7,617	8,726	8.702	9,262	10,344	11,465	11,476	11,838	12,106
Average	7,084	7,890	8.643	8,941	9,638	10,915	11,511	11,535	12,050

Sources: [4]

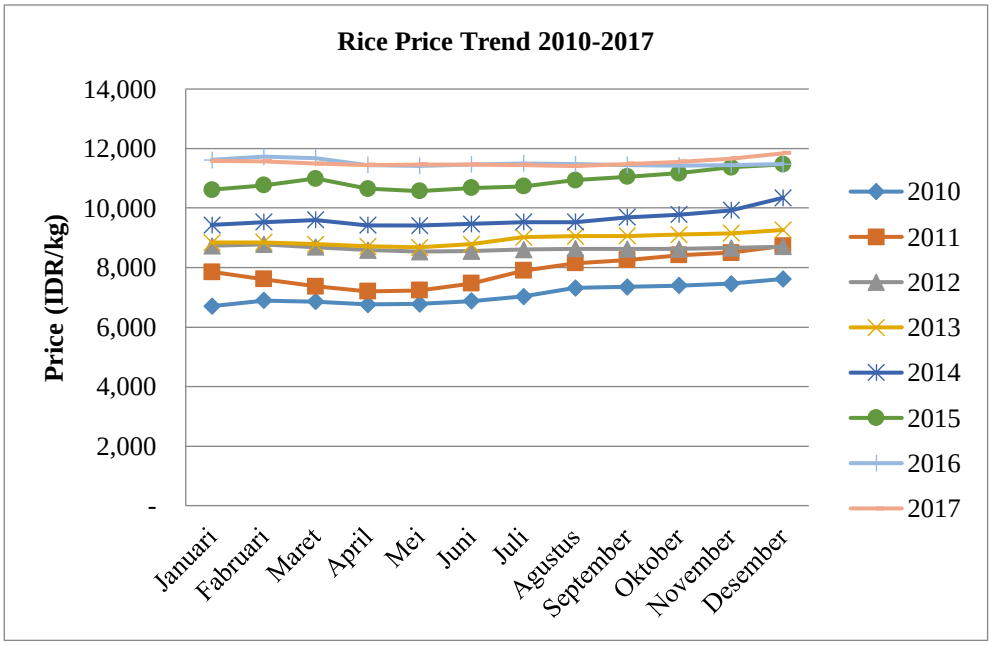

Fig. 3. Rice Price Trend 2010-2017.

The trend of national rice prices from 2010 to 2017 (Figure 3) shows a condition that tends to increase every year. From 2010 to 2018, the price was recorded to have increased by 70% or equivalent to an increase of IDR. 4,966/kg, with an average price increase of 7.31%. At the beginning of 2010 the price of rice was around IDR. 6,702/kg and in 2017 the price of rice was IDR. 11,836/kg.

A significant increase in rice prices occurred in July 2011, with an increase of 5.8% or an increase from the previous month of IDR 436/kg. This was due to crop disruptions and during

the previous planting period, resulting in a shortage of supply and an increase in rice prices. If you look at the pattern of rice price movements, every year has the same pattern, namely rice prices rise from December to January, then fall again from March to June. Starting in July, the price of rice rose slowly again until the end of the year. This pattern of price movements occurs related to the pattern of planting and harvesting rice which determines the amount of rice supply and reserves.

3.3 Rice price in international market

The price of rice in the international market fluctuates and varies between countries. Price fluctuations are caused by the large stock and demand of the importing country, while the price variation depends on the type and quality of rice [7]. Using the index price = 100 in the period 2002-2004, the average rice price for all types of rice in the international market from 2012 - 2016 fluctuated from 193 to 235. For rice on average, there was a decrease in the price index of 8.1%, the highest price actually occurred in 2014 (Table 3).

Table 3. Rice price index in FAO international market, 2012-2016 (Index 2002-2004=100).

Year	Rice price index (%)				
	Average all types of rice	**Premium quality rice**	**Medium rice quality**	**Japonica Rice**	**Aromatic Rice**
2012	231	225	241	235	222
2013	233	219	226	230	268
2014	235	207	201	266	255
2015	211	184	184	263	176
2016	193	180	187	228	153
Change (%)	-8,1	-2,1	1,7	-13,6	-13,0

The price index value applies to each category of types of rice
Source: [7]

The trend of rice prices in the 2012-2016 international market decreased, especially for premium, Japonica, and aromatic rice prices. The price of medium quality rice also fell, only from 2015 to 2016 it increased by 1.7. A significant price reduction (13%) also occurred for high quality Japonica rice and aromatic rice in 2012-2014. However, when compared to the price of each type of rice for the period 2002-2004, the price of rice for the period 2012-2016 has increased by 100% or more, especially for high-quality rice [7]. The price spike from a price index of 100 in 2004 to around an index of 200 in 2016 started in 2006 which rose to an index of 160, and prices peaked in 2008-2009 to an index of 260-280.

Food commodities including rice, corn, wheat, soybeans for twenty years between 1986-2006 recorded very low prices, only since 2006 experienced an increase and peak prices occurred in 2008-2009, along with the global monetary crisis. In nominal terms, the export price of Thai rice (Thai 5%) in 2016 was USD 386/ton FOB or at an exchange rate of USD 1 of IDR 13,000 equal to IDR 5,148,000/ton, FOB. Assuming the total cost of trading (transportation, unloading, warehousing, retail marketing costs and profits) is 40%, the estimated retail price of imported rice will be IDR 7,250/kg. The retail price is still cheaper than the price of domestically produced medium rice, around IDR 9,000/kg - IDR 10,000/kg or 72% - 80.0% of the retail price of domestically produced rice [26,27].

Due to fluctuations in rice prices in the international market, which can reach USD 573/ton FOB as in 2012, the price of imported rice after adding 40% for trading costs, becomes IDR 10,250/kg, or the same as the retail price of domestically produced rice [27]. The fluctuation of rice prices in the international market by type can be seen in Table 4.

Table 4. Fluctuations in rice prices in the international market by type in 2011-2018.

Year	Export Price (USD /ton, fob)								
	Thai white medium	**US long grain**	**Thai 5%**	**Vietnam 5%**	**Thai Super**	**US-Cal medium grain**	**Basmati**	**Aromatic Thai**	**Domestic rice [2]**
2011	565	577	549	505	464	821	1060	1054	713
2012	588	567	573	432	540	718	1137	1091	637
2013	534	628	518	391	483	692	1372	1180	660
2014	435	571	423	410	322	1007	1324	1150	697
2015	395	490	386	353	327	857	849	1008	774
2016	407	438	396	347	348	651	792	768	-
2017	415	456	398	372	334	673	1131	843	-
2018	465	541	439	429	374	906	1065	1176	-
Range	395-588	438-628	386-573	347-505	322-540	651-1007	792-1372	768-1180	637-774

Year 2018: January-June 2018
Source: [1] [7]
[2] based on conversion of IDR to USD price. [27]

The data in Table 4 shows that the retail price of rice in Indonesia, when compared to the price of rice in the international market, is slightly more expensive. However, it is not valid to compare the retail price of rice in the Indonesian market with the price of rice in the international market. The price of rice in the international market is the price offered by exporters at the port of the exporting country (FOB). This price still has to be added with transportation costs and trade administration costs up to the consumer level. Meanwhile, the domestic price of rice is the price of rice in the retail market.

The equivalent of Indonesian rice quality in Table 4 is Vietnamese rice 5%, which has an export price of between USD 347 and USD 505 per tonne. If this 5% Vietnamese rice is added with 40% transportation and trading costs, the Vietnamese rice price will be USD 485 to USD 707 per tons, slightly cheaper than the price of domestically produced rice sold in the domestic retail market. The difference is, from the sale of domestically produced rice, the economic value is 100% for the Indonesian people and around 75% for farmers, while the economic value for imported rice is 75% for farmers abroad.

To be able to achieve the ability to compete with rice prices in the international market, Indonesian rice which has the opportunity to be exported must have a special quality commensurate with Basmati rice, aromatic rice or US California Medium Grain rice (Table 4). Rice with specific quality in Indonesia whose quality is commensurate with aromatic rice or Basmati rice, the selling price in the domestic market is also high, but if exported, the price can compete with international high quality rice prices. Rice with medium to premium quality, when exported, the price abroad is not namely by making purchases at market prices and exporting at lower prices. However, such export subsidies do not encourage domestic economic growth, because the benefits are enjoyed by Indonesia's rice importing countries.

Retail rice prices in many countries show that in rice exporting countries, the retail price level is lower than the domestic retail rice price in Indonesia. However, in rice importing countries, the level of rice prices is comparable and a fraction higher than retail rice prices in Indonesia (Table 4). High retail prices in a country can be caused by many factors, such as: 1) high entry costs for rice imports; 2) expensive transportation costs; 3) high rice trading costs; or 4) in the case of Japan, the government wants to protect Japanese domestic rice farmers.

In African countries which are generally classified as poor, high retail rice prices may be due to the limited supply of rice in the domestic market due to the country's limited ability to import rice. Poor people are forced to consume domestically produced foodstuffs that are

cheaper, such as sorghum, corn, cassava, and other tubers. This can be seen from the low level of rice prices in these countries (Table 5).

Table 5. Retail rice prices in various countries in 2012 and 2016.

Country	Rice Retail Price (USD/kg)	
	Year 2012	**Year 2016**
ASIA		
Bangladesh	0.35	0.45
Bhutan	0.37	0.45
Cambodia	0.42	0.39
China	0.85	0.92
India	0.47	0.42
Indonesia	1.14	0.80
Japan	5.00	5.59
South Korea	1.50	1.58
Laos	1.00	0.95
Mongolia	1.24	1.09
Nepal	0.44	0.47
Pakistan	0.54	0.41
Filipina	0.82	0.84
Sri Lanka	0.43	0.57
Thailand	0.49	0.32
Vietnam	0.35	0.31
Saudi Arabia	2.10	2.13
AFRIKA		
Benin	1.07	1.00
Burkina paso	0.75	0.57
Cape Verde	1.11	1.10
Chad	1.01	0.84
Rwanda	1.16	0.90
Uganda	1.34	0.92
Tanzania	1.17	0.70
CENTRAL AMERICA		
Costa Rica	1.55	1.30
Dominica	1.20	1.01
Mexico	0.82	0.68
SOUTH AMERICA		
Panama	1.13	0.87
Bolivia	0.84	0.92
Brazil	1.10	1.00
Ecuador	0.96	1.26
The United Nation	1.54	1.54
EUROPE		
Italia	1.25	1.10
Russia	1.46	1.40

Source: [7]

Bilateral trade negotiations with countries with high domestic rice prices, such as Saudi Arabia, Nigeria, and Japan, allow Indonesia to supply rice to these countries. With Japan, Indonesia can export rice of specific quality as desired by the people/market in Japan

(Japonika rice) on the basis of reciprocal trade. Likewise, rice exports to Saudi Arabia should be carried out on the basis of reciprocal trade.

Rice prices in Indonesia are relatively more expensive than international rice prices, mainly due to high labor costs. Rice farming is done manually in most types of work. The small scale of farming makes the use of labor less efficient, because each farming unit is treated as an object of work by a group of workers. The work shift of farm laborers from one farming to the next is punctuated by a process of rest, negotiation or conversation that takes a long time to work.

3.4 Obstacles to competitiveness of Indonesian rice prices in the international market

The comparative advantages of rice-exporting countries to Indonesia are mainly lower production costs, and higher production efficiency on a much wider scale per rice farm. Rice farming in Indonesia is obtained from an area of 0.2 - 0.7 ha per rice farm, so that the use of farming inputs, labor, agricultural machinery, and capital becomes less efficient [15]. Farmers with a farming scale of less than 0.5 ha tend to allocate higher resources (seeds, fertilizers, medicines, water, labor and capital) when converted into one hectare farming unit. Rice farming in rice exporting countries is carried out by farmers with land ownership of more than 1 ha/farmer [13]. Indonesian rice farmers, especially on the island of Java, are forced to provide jobs (paid labor) to farm laborers who are quite large in number. Manual work that should be carried out by land-owning farmers, according to the prevailing custom in the countryside, must be done by farm laborers for wages [25]. This causes rice farming to be carried out by multiple workers, namely by land owners who do not work actively and by farm workers who do work in the field. Even though the landowners are not paid wages, their labor becomes unproductive. This causes the cost of rice production in Indonesia to be higher.

Several factors have contributed to the low competitiveness of Indonesian rice in the international market, namely (1) higher production costs, because they have to pay wages for all farm work, land owners do not do their own farming work, on the other hand, laborers work sluggishly; (2) The small scale of farming (less than 0.5 ha) causes the production process to be inefficient and over budgeted; and (3) farmers are burdened by other additional costs.

4 Conclusion

Rice is an international trade commodity, with limited supply and quite a lot of rice importing countries. More than 40 countries produce rice, the most by developing countries in Asia. Only six countries are the main rice exporters in the world, namely India, Thailand, Vietnam, the United States, Myanmar and Cambodia. The biggest rice importing countries (more than 1 million tons per year) are China, Nigeria, Iran, Senegal, Ivory Coast, Saudi Arabia and the Philippines. The condition of world rice can be said to be "in equilibrium of supply and demand".

The availability of rice in the world market is relatively small, only around 39-42 million tons per year. As many as 40% of them are imported by countries in Asia. China is the biggest rice importer, reaching 6 million tons per year. The price of rice in the world market for medium rice based on export offers is around USD 310 - USD 340 per ton f.o.b. If we add trade costs and market profits of 40%, the retail price of imported rice is around IDR 6000/kg - IDR 7,000/kg, cheaper than the price of domestically produced rice. On this basis, Indonesian bras whose retail price is IDR 10,000/kg are considered less competitive in the

international rice market. However, this does not negate the importance of Indonesia being self-sufficient in rice and not depending on imports.

Retail rice prices in various countries in the world are very diverse, the cheapest is in Vietnam (35 cents dollars); Thailand (32 cents on the dollar); and the most expensive in Japan (USD 5.59/kg) and Saudi Arabia (USD 2.13/kg). The average price of rice in other countries is around USD 1.0/kg, Indonesia USD 0.50/kg. The price of rice in African countries is around USD 1.0/kg. On the basis of bilateral trade, Indonesian rice has competitiveness against rice prices in Saudi Arabia, Japan and countries in Africa. Indonesian rice exports to Saudi Arabia, Japan and several countries in Africa show opportunities due to competitive prices, if they can be supported by reciprocal trade.

If the surplus of rice production reaches more than 2 million tons per year and occurs consistently, Indonesia has the opportunity to export rice to countries in Africa and specific rice to Saudi Arabia and Japan. Rice trade cooperation must be based on bilateral agreements and reciprocal trade principles.

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