ABSTRACT: This research aims to understand the development of rice imports, the factors driving rice imports, the impact of rice imports, and steps to increase production and reduce rice imports in Indonesia. This research uses a descriptive qualitative approach. Data collection uses secondary data from CNBC Indonesia YouTube news videos and rice import data from the Central Statistics Agency. The data analysis technique uses the Interactive Model from Miles et al. (2014). The research results show that based on data recorded at the Central Bureau of Statistics, Indonesia imported rice from 2000-2023 to maintain availability, strengthen rice reserves, anticipate El Nino events, and increase population. The impact of rice imports is to maintain the situation's stability, but if the policy is inappropriate, it can harm domestic farmers. Efforts that the government can make to increase production and reduce rice imports include implementing the steps successfully implemented by Cambodia, immediately creating a program to increase rice production, and focusing more on intensifying land productivity increases.

KEYWORDS: Macroeconomics, Rice Imports, Rice Production, Rice Consumption, Food Security

I. INTRODUCTION

As an agricultural country with fertile land, Indonesia should have the capacity and ability to cultivate rice to meet domestic needs. However, Indonesia has polemics and problems related to domestic rice commodities. Rice is a staple food in most Asian countries, and food security is often seen as an effort to have rice supplies to prevent food crises (Putra et al., 2021), based on data from the Central Statistics Agency (BPS) Area Sample Frame, Indonesia's rice production from January to December 2022 reached 31.9 tons. Meanwhile, national rice demand in 2022 will be 30.2 million tons. Thus, Indonesia experienced a rice surplus of 1.7 tonnes. Even though it is experiencing a large surplus, Indonesia will still import rice in 2022 (Wuryanto, 2022). This rice import activity is not new because it has existed since the Old Order and New Order (Afriyadi, 2021).

Import refers to the process of bringing in goods from abroad, generally carried out to meet domestic needs for goods that have not been or are not yet produced domestically (Widyanty et al., 2022). Factors that cause rice imports in Indonesia are rice stocks that are not sufficient for people's needs/consumption, rice reserves due to weather factors, and food stability due to a large number of rice fields changing their function, such as becoming residential areas and turning into industries (Rahayu & Febriaty, 2019). The results research of Hasanah (2022) explains the factors influencing rice imports in Indonesia, involving rice production, rice consumption, rice harvest area, and the Gross Domestic Product (GDP) level. Meanwhile, research by Wibawa et al. (2023) found that factors that significantly influence rice imports are domestic rice prices and production. Other factors influencing rice imports are population size, previous demand for rice, per capita income, area of harvested land, and estimated demand for rice.

Rice imports can indeed offer a solution in the short term to meet domestic consumption needs, but in the long term, this activity can cause problems because it can disrupt the rice trade balance (Pudjiastuti et al., 2021). Additionally, Abbas et al. (2018) revealed that several negative impacts of sustainable rice imports could worsen the poverty of small-scale rice farmers.
Dynamics of Rice Imports in Indonesia: Analysis of Development, Causative Factors, Impacts and Solutions

Due to high production costs, large rice imports also create jobs in the country of origin. At the same time, local farmers who cannot compete will lose their jobs, increasing unemployment and threatening local food security. Dependence on rice imports also causes unpredictable price fluctuations and hinders sustainable development. If linked to dependency theory, agricultural development in Indonesia has experienced an ideological and practical transformation that could threaten food sovereignty (Octastefani & Kusuma, 2015).

Thus, from the description of the problem explanation and theoretical basis that has been explained previously, this research aims to 1) determine the development of rice imports in Indonesia; 2) factors that encourage Indonesia to import rice; 3) the impact of rice import activities in Indonesia; and 4) steps to increase production and reduce rice imports.

II. RESEARCH METHODOLOGY

This research uses a descriptive qualitative approach. According to Creswell & Creswell (2023), qualitative research is characterized by an inductive approach to knowledge building, which aims to produce meaning that is used to study social phenomena and powerfully uncovers the meaning ascribed to activities, situations, events, people, or artifacts; or develop a deep understanding of some dimension of social life. Qualitative research is suitable for research whose main aim is to explore, describe, or explain. Meanwhile, description (or descriptive research) explains individuals, groups, activities, events, or situations (social research objectives). This research collected secondary data from many news videos related to rice imports obtained from the online platform YouTube channel CNBC Indonesia. This channel was chosen because CNBC Indonesia is an online mass media affiliated with CNBC International that can provide information on macroeconomics, capital markets, banking, other financial industries, commodities, manufacturing, international economics, politics, law and security that influence economic dynamics. Comprehensively nationally. Apart from that, this research also uses secondary data in the form of developments in the number of Rice Imports by Main Country of Origin in 2000-2022 obtained from the official website of the Central Statistics Agency, which can be accessed via the link https://www.bps.go.id/statictable/2014/09/08/1043/impor-beras-menurut-negara-asal-utama-2000-2022.html. Data analysis uses the Interactive Model from Miles et al. (2014), which is divided into several parts of analysis activities: data collection, condensation, data presentation, and drawing conclusions or data verification.

III. RESULTS AND DISCUSSION

A. Development of Rice Imports in Indonesia


Source: Central Statistics Agency (2023)

Indonesia is known as an agricultural country, but this status does not guarantee that Indonesia is free from food imports, one example of which is rice. The Central Statistics Agency noted that from 2000 to 2022, Indonesia imported rice every year. In 2023, the government has given Bulog the task of importing 2 million tons of rice. Even though Indonesia still imports rice, in 2022, Indonesia received an award from the International Rice Research Institute (IRRI) for the success of Indonesia’s food security system in terms of rice self-sufficiency. Indonesia received a similar award in 1984 from FAO by winning the rice self-
Dynamics of Rice Imports in Indonesia: Analysis of Development, Causative Factors, Impacts and Solutions

sufficiency medal in recognition of rice production of 27 million tons per year. The Indonesia Medal: From Rice Importer to Self Sufficiency was given directly by FAO to President Soeharto. In other words, Indonesia still maintains its status as a self-sufficient rice country, where the rice production and demand ratio remains above 90%. The development of rice imports in Indonesia from the reign of President Soeharto to President Joko Widodo can be described as follows (CNBC Indonesia, 2023e):

- Era of President Soeharto

During President Soeharto's reign, Indonesia did not import rice after receiving a medal from FAO from 1985 to 1986. However, rice imports increased significantly after that period, reaching 1.3 million tonnes in 1995 and 2 million tonnes in 1996. The number of rice imports increased again before Suharto became president in 1998. At that time, Indonesia imported 2.8 million tons of rice, and it became one of the legacies of Soeharto's government before it ended.

- Era of President B. J. Habibie

After President Soeharto's term of office ended, B. J. Habibie continued and assumed the position of President of Indonesia in October 1999. Despite this, the Indonesian government still implemented a rice import policy, reaching the highest record in history at 4.8 million tons. This happened during the transition period from the New Order to the Reform Order, which was a complex and challenging task for President B. J. Habibie to keep Indonesia out of the crisis.

- Era of President Abdurrahman Wahid

During the administration of President Abdurrahman Wahid or Gus Dur in 2000, the amount of rice imports was reduced to only 1.35 million tons.

- Era of President Megawati Soekarnoputri

In the following year, namely 2001, Megawati's government succeeded in continuing the trend of decreasing rice imports, falling to 644.7 thousand tons. Even though it rose to 1.8 million tons in 2002, exceeding the amount during Gus Dur's reign, in 2003, the amount of imports was successfully reduced to 1.4 million tons.

- Era of President Susilo Bambang Yudhoyono

During the administration of President Susilo Bambang Yudhoyono's (SBY) leadership, who replaced the Megawati era, rice imports experienced a significant decline in 2004, reaching only 236.8 thousand tons. As president directly elected by the people, SBY succeeded in realizing his campaign to advance the agricultural sector in Indonesia. In 2005, rice imports continued to decline to 189.6 thousand tons. Despite an increase in 2007 to 1.4 million tonnes, SBY managed to keep rice imports from increasing drastically over the next three years. 2010, there was a significant increase to 687.5 thousand tons; in 2011, it reached the highest record in over a decade, namely 2.75 million tons. However, SBY gradually reduced rice imports until the end of his term in office in 2012-2014. In 2012, imports fell to 1.81 million tonnes and continued to decline in 2013 to 472.6 thousand tonnes. Even though it increased in 2014 to 844.2 thousand tons, this number was still below the figure in 2011.

- Era of President Joko Widodo

During President Joko Widodo's leadership, the amount of rice imports experienced fluctuations. Rice imports reached their highest peak in 2018, around 2.25 million tons. In the second period of Jokowi's administration, he succeeded in keeping rice imports below 1 million tons. From 2019 to 2022, rice imports varied between 300 and 400 thousand tons over a reasonably long period without any significant increase. However, the previous era, namely 2015 to 2017, experienced more significant fluctuations. In 2023, the government has set a rice import quota of 2 million tons.

B. Faktor-Faktor yang Mendorong Indonesia untuk Mengimpor Beras

Anggito Abimanyu, Chief Economist of CNBC Indonesia, explained that imports are one way to meet needs, so imports should not be a goal but should be done when domestic production is insufficient for consumption and the demand for rice reserves (CNBC Indonesia, 2023g). I Gusti Ketut Astawa, who serves as Deputy I for Food Availability & Stabilization at BAPANAS, stated that the main reasons why Indonesia had to return to importing rice in large quantities include (CNBC Indonesia, 2023c):

- Decreasing National Rice Production

<table>
<thead>
<tr>
<th>Table I. National Rice Stocks For The Period September – October 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice Production (Million Tons)</td>
</tr>
<tr>
<td>September 2023</td>
</tr>
<tr>
<td>October 2023</td>
</tr>
</tbody>
</table>

Source: CNBC Indonesia (2023d)

At the 2023 inflation control coordination meeting held by the Central Statistics Agency on September 11, 2023, there was predicted to be a domestic rice deficit of around 0.09 million tons in September 2023 and about 0.027 million tons in October.
Dynamics of Rice Imports in Indonesia: Analysis of Development, Causative Factors, Impacts and Solutions

2023. Rice production is estimated to reach 2.46 million tonnes, while consumption is estimated to reach 2.55 million tonnes per month. The Central Statistics Agency states that this data is based on the national rice harvest area, which is predicted to decline, and national rice production, which is also expected to decrease (CNBC Indonesia, 2023d). Meanwhile, on the other hand, productivity is stagnant and has not experienced a significant increase, so the availability of rice in the country tends to decrease compared to previous years (CNBC Indonesia, 2023a). There is a downward trend at the end of 2023 compared with last year, especially in October, November, December, and January, the months with the lowest production. In fact, since July, the rice deficit has become fully visible (CNBC Indonesia, 2023d).

Meanwhile, if we look at ASEAN rice production data, it can be seen as follows:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ASEAN</td>
<td>195,511.77</td>
<td>200,435.35</td>
<td>2.52</td>
<td>202,336.68</td>
<td>901.32</td>
</tr>
<tr>
<td>Brunei</td>
<td>3.56</td>
<td>4.35</td>
<td>22.07</td>
<td>4.66</td>
<td>0.31</td>
</tr>
<tr>
<td>Cambodia</td>
<td>11,623.87</td>
<td>11,971.39</td>
<td>2.99</td>
<td>12,342.73</td>
<td>371.35</td>
</tr>
<tr>
<td>Indonesia</td>
<td>54,748.98</td>
<td>56,944.05</td>
<td>4.01</td>
<td>56,961.80</td>
<td>17.75</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>3,781.58</td>
<td>4,008.75</td>
<td>6.01</td>
<td>4,085.00</td>
<td>76.25</td>
</tr>
<tr>
<td>Malaysia</td>
<td>2,364.45</td>
<td>2,430.03</td>
<td>2.77</td>
<td>2,394.64</td>
<td>-35.56</td>
</tr>
<tr>
<td>Myanmar</td>
<td>27,446.01</td>
<td>26,729.39</td>
<td>-2.61</td>
<td>28,496.79</td>
<td>1,767.40</td>
</tr>
<tr>
<td>Philippines</td>
<td>19,903.98</td>
<td>20,106.14</td>
<td>1.02</td>
<td>20,583.15</td>
<td>477.01</td>
</tr>
<tr>
<td>Singapore</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Thailand</td>
<td>32,977.78</td>
<td>34,353.88</td>
<td>4.17</td>
<td>32,354.34</td>
<td>-1,999.55</td>
</tr>
<tr>
<td>Vietnam</td>
<td>42,661.56</td>
<td>43,887.38</td>
<td>2.87</td>
<td>45,113.75</td>
<td>1,226.36</td>
</tr>
</tbody>
</table>

**Figure 2. ASEAN Rice Production**

*Source: Dwi (2023)*

The data above shows that rice supplies in Southeast Asian or ASEAN countries are expected to increase by around 3% in 2024. This increase in supply is primarily due to increased stocks and production compared to the previous year. Meanwhile, suppose you look at ASEAN rice production data in 2023 (harvest year 2022-2023) compared to 2022 (harvest year 2021-2022). In that case, production is estimated to increase in all countries except Malaysia and Thailand, where the negative figures are due to increased harvest area and yield. Regarding actual size, Indonesia is still number one with the most significant production in ASEAN. Still, Cambodia is also starting to overtake the position of the ASEAN country with the most considerable rice production. Cambodia's current position in terms of size is in sixth place after the Philippines. Even Indonesia, the largest rice producer in ASEAN, plans to import or buy rice from Cambodia.

**Strengthening Food Reserves**

One of the reasons the Indonesian government imports is to increase and strengthen domestic rice food reserves. The government's rice importation is not intended to be sold to the public. Rice imported from various countries grows the government's rice reserve stock, known as the Government Rice Reserve (CBP). Perum Bulog manages this CBP and will be used for stock intervention and price stabilization through a market operation mechanism, part of the Rice Food Supply and Price Stabilization Program or SPHP. Apart from that, CBP is also used to support people's purchasing power by meeting the distribution needs of social assistance for rice food. Thus, the government's decision to import rice was mainly made to maintain supply, maintain price stability, and maintain people's purchasing power (CNBC Indonesia, 2023e, 2023b).

**Anticipate El Nino Weather**

Indonesia must import rice to anticipate El Nino weather, which could disrupt rice production (CNBC Indonesia, 2023d). In 2023, Indonesia will experience the impact of the El Nino phenomenon. This resulted in a decrease in surplus due to decreased production, and the situation was further complicated by the addition of El Nino, which caused extraordinary price fluctuations during the year due to limited availability. Therefore, the government decided to import (CNBC Indonesia, 2023a). Indonesia needs imports because some domestic production is affected by field conditions, especially during the El Nino period. The government has taken mitigation measures against El Nino and has been warning since February. As instructed by the President, the steps involve strengthening embungs, dams, and other criteria. However, the situation is also very dependent on rainfall, which has decreased since June and July, so it will significantly impact Indonesia's rice production (CNBC Indonesia, 2023c).

**Increasing population**

Indonesia must import rice because the population continues to increase (CNBC Indonesia, 2023d). Rice consumption will increase due to population growth, so the need for rice consumption will also increase. From the production, supply, and
Dynamics of Rice Imports in Indonesia: Analysis of Development, Causative Factors, Impacts and Solutions

Demand aspects, it is clear that Indonesia's rice production has decreased due to natural conditions, while demand has increased due to population growth. This is a consequence of market laws, and it is necessary to realize that the longer this imbalance is, the more detrimental it becomes. Therefore, Bulog must have Food Rice Reserves (CBB) stored in the warehouse, and if a drought or other emergency occurs, this stock can be used immediately. These stocks are almost empty, so rice imports are the only adequate option. This can be considered the right step to ensure national food security (CNBC Indonesia, 2023g).

C. The Impact of Rice Import Activities in Indonesia

The Indonesian government, as the decision maker, of course, when making a decision, has carried out studies with several related institutions. This aims to ensure that the decisions taken do not harm any party. In 2023, Indonesia will experience the impact of the El Nino event, which will cause a decrease in availability and increase in rice prices. Considering that most of Indonesia’s population consumes rice, the government must import rice to maintain stability. Policies that are inappropriate because they are not based on accurate data will have an impact on rice farmers in Indonesia because they are the ones who will suffer the most. Events in 2019, 2018, and several previous years when the government suddenly imported high volumes immediately reduced prices at the farming level, which was detrimental to farmers. Therefore, maintaining stable prices for farmers is very important, remembering that the farmers produce rice, not the government or traders. Thus, the most crucial thing is how to ensure adequate prices for harvested dry grain for the sustainability of farmers in Indonesia (CNBC Indonesia, 2023f).

From the explanation above, to anticipate events that will have an impact on Indonesian food, the government can carry out:

- Implementing Amendments
I Gusti Ketut Astawa, Deputy for Food Availability & Stability of Bapenas, explained that the mandate of the Law of the Republic of Indonesia regarding food security covers aspects of availability, food safety, fair prices, and so on. In other words, food security is not only related to food availability. Therefore, Indonesia must continue to make food security a top priority because, with food security supported by independence, self-sufficiency can be adequately achieved (CNBC Indonesia, 2023a).

- Take Precise Policies
IPB Professor Dwi Andreas Santosa explained that the decision to import should be taken in August because, in that month, BPS can estimate how much national production will be in the current year. Apart from monitoring national production, BPS must also have adequate facilities, infrastructure, and funds to carry out regular national rice stock surveys, which are currently only carried out sporadically. This survey includes information about how much rice farmers, traders, and the government hold. Knowing the amount of national rice stock in August, you can estimate rice or grain production for the current year more accurately. So, decisions regarding imports can be taken on time and based on more accurate data. Currently, import decisions are based on estimates that do not always correspond to actual times and quantities (CNBC Indonesia, 2023f).

D. Steps to Increase Production and Reduce Rice Imports

Cambodia has succeeded in increasing rice production through several steps, even making it a rice exporter on the global market. A total of ten actions have been implemented by Cambodia, including (CNBC Indonesia, 2023d):

- Transformation of the Rice Sector
Cambodia is seeking to transform its rice sector into a commercially oriented industry. This involves modernization in rice production, including the use of modern technology and improvements in agricultural infrastructure.

- Collaborating with International Institutions
Cambodia collaborates with international institutions such as the Global Agriculture and Food Security Program and the Strategic Climate Fund under the Climate Investment Funds, where this collaboration aims to help Cambodia face the challenges of climate change and maintain the welfare of farmers and agricultural resources.

- Developing a “Rice Basket” Image
It has plans to promote itself as a rice basket and significant exporter. This is an effort to create a positive image of Cambodia as a reliable and high-quality rice producer.

- Increased Production
Cambodia has managed to increase rice production significantly in recent years. Based on the data, it can be seen that rice production increased from around 8 million tonnes in 2012 to 10.9 million tonnes in 2020. This reflects efforts to increase production sustainably.

- Development of Rice Seeds
The development of rice seeds is also a problem in the country. Cambodia has succeeded in producing 2,493 tons of fragrant rice seeds every year in 3 provinces in Cambodia, which are the main focus.

- Irrigation Infrastructure
Dynamics of Rice Imports in Indonesia: Analysis of Development, Causative Factors, Impacts and Solutions

It is creating irrigation infrastructure and land that remains resilient to the extreme climate changes in all countries.

- Export to Specific Markets
- Cambodia directs its exports to specific markets, such as the European Union, by adjusting trade policies and exploiting profitable market opportunities.
- Increased Demand
- Cambodia is driving increased demand from neighboring countries.
- Support Policy
- The Cambodian government issued support policies such as the Promotion of Study Production and Rice Export policy to support the rice sector and promote Cambodian rice to the world market.
- Collaboration with other countries
- Collaborative efforts with other countries such as Indonesia to support food security infrastructure and also expand export markets.

In fact, of the ten steps taken by Cambodia, Indonesia also has great potential to implement similar measures domestically. However, this requires consistency and commitment, especially from the government. Apart from that, the President of the Republic of Indonesia, Soeharto, once led the implementation of a program called Rice Self-Sufficiency, which aims to achieve independence in domestic rice production. Some of the actions taken within the framework of this program include increasing rice production, providing agricultural subsidies, and controlling rice prices (CNBC Indonesia, 2023d). Sutarto Alimoeso, as General Chair of PERPADI, explained that the government must immediately launch special programs to increase domestic rice production. Several problems in the field, such as difficulties in obtaining fertilizer, land conversion, and poor-quality seeds, must receive attention through improvement efforts. If these improvements are successful, the hope is that Indonesia's rice production can increase. All components will move together to support this effort by improving cultivation, increasing seed quality, and protecting potential land from conversion. In this way, Indonesia will not only rely on imports as a solution during shortages but also avoid food dependency, which could threaten the country's stability. Therefore, Indonesia does not only focus on food security but also food sovereignty and independence (CNBC Indonesia, 2023a).

According to Anggito Abimanyu, Chief Economist of CNBC Indonesia, he explained that there are two ways to increase production: extensification by adding land and intensification by increasing the productivity of existing land. The government has previously used both approaches, but extensification is no longer possible, especially outside Java, where land productivity is low. Therefore, the dilemma currently lies in the need to intensify, not extensification. Intensification means looking for ways that the same land can produce higher production. This involves educating farmers, using superior seeds, and using better fertilizers to increase output on increasingly limited ground. This should be the focus of the Ministry of Agriculture, with the realization that continuing to rely on extensification will not achieve the desired results. Factors such as the relocation of land for non-agricultural uses, such as for buildings and oil palm plantations, also need to be recognized as changes that have occurred. In addition, climate change, such as extended droughts, is an additional factor that must be considered (CNBC Indonesia, 2023g).

Thus, from the various explanations above, it can be seen that several efforts can be implemented by the Indonesian government to increase production and reduce rice imports, namely as follows:

- The Indonesian government can implement the steps that have been successfully implemented by Cambodia, with consistency and high commitment, namely through transforming the rice sector, collaborating with international institutions, developing the “Rice Basket” image, increasing production, developing rice seeds, irrigation infrastructure, exports to specific markets, increased demand, supportive policies, and cooperation with other countries.
- The Indonesian government must immediately create a program to increase rice production by improving cultivation, providing agricultural subsidies, improving seed quality, protecting potential land from conversion, and controlling rice prices.
- The Indonesian government must focus more on intensification methods to increase the productivity of existing land so that the same land can produce higher production by providing extension education to farmers, using prime seeds, and using better fertilizer to increase rice production on existing land.

CONCLUSIONS

Indonesia's status as an agricultural country does not mean that food security and availability can meet needs. Data recorded by the Central Statistics Agency proves that from 2000-2023, Indonesia is still importing rice. This is because the planning, utilization, and governance carried out by state leaders are still not optimal. The rice imports carried out by the Indonesian government are not aimed at monopolizing the market. Still, they are only a way to maintain availability because domestic rice
Dynamics of Rice Imports in Indonesia: Analysis of Development, Causative Factors, Impacts and Solutions

productivity is insufficient to meet needs. The government also aims to strengthen rice reserves, anticipating El Nino events and increasing population. In deciding whether to import, it is a good idea for the government to have carried out research and studies with several related institutions so that the decision is accurate and that no one is harmed.

The implications of the research results can be used as consideration by the government in handling a similar case, namely by road. They are first transforming the rice sector, collaborating with international institutions, increasing production, developing rice seeds, irrigation infrastructure, exports to specific markets, increasing demand, and supporting policies. Second, create a program to increase rice production through cultivation, provide agricultural subsidies, improve seed quality, protect potential land, and control rice. Third, focus on existing land by providing counseling, using superior seeds, and using better fertilizer.

REFERENCES

5) CNBC Indonesia. (2023b). Bulog Impor 1,5 Juta Ton Beras Hingga China Keluarkan Senjata Baru. https://www.youtube.com/watch?v=32R3gAEzZAs
6) CNBC Indonesia. (2023c). Jokowi Tambah Impor Beras 1,5 Juta Ton, Apa Urgensinya? https://www.youtube.com/watch?v=1KGNIS2gw70
Dynamics of Rice Imports in Indonesia: Analysis of Development, Causative Factors, Impacts and Solutions


There is an Open Access article, distributed under the term of the Creative Commons Attribution – Non Commercial 4.0 International (CC BY-NC 4.0) (https://creativecommons.org/licenses/by-nc/4.0/), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.