

## Navigating Global Agricultural Trade Challenges in Post-Pandemic in ASEAN

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### Abstract

*This study explores the challenges and opportunities for agricultural trade in the ASEAN region in the aftermath of the COVID-19 pandemic. The pandemic has significantly disrupted global agricultural trade by affecting supply chains, changing consumer demand, and creating economic hardships for producers. The research aims to address how these disruptions impact the competitiveness of ASEAN countries in global markets and what strategies can be employed to mitigate these effects. The research question focuses on identifying the key factors influencing agricultural trade in the post-pandemic era and assessing the effectiveness of various policy responses. A qualitative methodology was employed, including an extensive literature review and analysis of secondary data sources such as academic journals, industry reports, and policy documents. The study finds that ASEAN countries, despite their strong agricultural potential, face numerous challenges including climate change, market volatility, and environmental sustainability. Results indicate that strengthening supply chain resilience, promoting sustainable practices, and enhancing regional cooperation are crucial for sustaining and growing the agricultural sector in ASEAN. Policymakers are urged to adopt strategies that balance economic growth with environmental sustainability and to invest in technological innovation and infrastructure development to support long-term agricultural resilience in the region.*

### Keywords

*Agricultural, Trade, Post-Pandemic, Covid-19, ASEAN*

## Introduction

The COVID-19 pandemic has had a significant impact on global agricultural trade, leading to disruptions in supply chains, changes in consumer demand, and economic challenges for farmers and producers (Amanta and Aprilianti, 2020). The pandemic has heightened awareness of the importance of food security and the vulnerabilities of global supply chains (Barrett, 2021). This has led to an increased demand for locally-sourced agricultural products. Governments and policymakers are now focusing on strategies to diversify agricultural production, improve supply chain logistics, and invest in technological innovations that can enhance the efficiency and sustainability of agricultural operations (Veeck *et al.*, 2020).

As countries seek to rebuild their economies, there may be a temptation to implement protectionist measures, such as tariffs or export restrictions, to support domestic producers (Amanta and Aprilianti, 2020). Governments, industry stakeholders, and international organisations will need to work together to develop harmonised trade policies, facilitate the flow of goods and services, and ensure the equitable distribution of agricultural resources (Barrett, 2021). This will require a delicate balance between national interests and global collaboration, as countries strive to build more resilient and sustainable food systems.

International trade in agricultural products can contribute to environmental degradation through the increased production and transportation of goods (Balogh and Jámor, 2020). The transportation of agricultural commodities over long distances, as well as the energy-intensive nature of certain farming practices, can lead to significant carbon footprints (Leahy *et al.*, 2020). This has prompted calls for the development of more sustainable and low-emission agricultural trade pathways. Also, the expansion of agricultural production to meet global demand can lead to the clearing of natural habitats, the loss of biodiversity, and the degradation of soil and water resources (Balogh and Jámor, 2020).

The agricultural industry faces numerous challenges such as droughts, floods, and heatwaves, can disrupt crop yields, livestock productivity, and the availability of water resources (Leahy *et al.*, 2020). The overexploitation of arable land and freshwater, combined with the impacts of climate change, can threaten the long-term sustainability of the agricultural industry (Batmunkh *et al.*, 2022). Also, fluctuations in commodity prices, changes in consumer preferences, and shifts in trade policies can all have significant impacts on the profitability and competitiveness of agricultural producers (Siregar and Widjanarko, 2022).

To address these challenges, policymakers develop environmental considerations into trade agreements and policies (Balogh and Jámor, 2020). Prioritises environmental sustainability and the long-term viability of food systems (Batmunkh *et al.*, 2022), strengthening of supply chain resilience (Veeck *et al.*, 2020). Challenges facing the agricultural industry are complex and multifaceted, requiring a comprehensive and collaborative approach to ensure the long-term sustainability.

The pandemic has caused widespread disruptions in transportation, logistics, and border closures, making it difficult for agricultural products to reach markets in a timely manner. Agricultural producers in the ASEAN region must adapt to these changing trends in order to remain competitive in the global market. Furthermore, the Covid-19 pandemic has highlighted the vulnerabilities of agricultural systems to external shocks and crises.

This study seeks to explore and analyse these challenges through a qualitative research approach, aiming to provide insights and recommendations for policymakers, industry stakeholders, and other relevant parties. One of the key challenges facing agricultural trade in the post-Covid-19 era is the disruption of supply chains. By conducting a qualitative research study, this research aims to provide valuable insights and recommendations for addressing these challenges and promoting sustainable and resilient agricultural trade in the region.

## **Literature review**

One of the primary ways in which agriculture contributes to economic growth is through its direct contribution to GDP. The agricultural sector produces a wide range of goods, including food crops, cash crops, and livestock products, which are essential for both domestic consumption and international trade (Febriyanti *et al.*, 2022). Also, different regions possess varying levels of arable land, water resources, and suitable climates for cultivating different crops. This heterogeneity creates opportunities for trade, as countries can specialise in producing and exporting the commodities they have a comparative advantage in, while importing those they cannot produce as efficiently (Snell, 2020).

Agricultural trade can contribute to food security by ensuring a stable and diverse supply of food products. Countries can supplement their domestic food production by importing agricultural goods, which can help mitigate the impact of local crop failures or supply disruptions (Habib-ur-Rahman *et al.*, 2022). The economic benefits of agricultural trade extend beyond the direct exchange of goods. Participation in international trade can also lead to technology transfer, knowledge sharing, and the introduction of more efficient production methods (Febriyanti *et al.*, 2022).

However, the impact of agricultural trade is not always straightforward. Trade liberalisation and the removal of trade barriers can have both positive and negative consequences for different stakeholders, such as producers, consumers, and policymakers. Careful policy considerations are required to ensure that the benefits of agricultural trade are distributed equitably and that the potential negative impacts, such as the displacement of small-scale farmers, are mitigated (Jagdambe and Kannan, 2020).

One of the key challenges posed by climate change is the impact on crop yields. Rising temperatures, changing rainfall patterns, and the increased frequency of droughts, floods, and other extreme weather events can lead to significant reductions in crop yields, particularly in regions that are already vulnerable to food insecurity (Mukhopadhyay *et al.*, 2021). Some regions

may experience increased productivity, while others may face severe declines, leading to shifts in the comparative advantages of different countries in agricultural production (Habib-ur-Rahman *et al.*, 2022). Adaptation measures, such as the development of drought-resistant crop varieties, the implementation of sustainable irrigation practices, and the enhancement of early warning systems, can help to mitigate the impacts of climate change on agricultural production (Mohammadi *et al.*, 2022). At the policy level, governments and international organisations can play a crucial role in ensuring food security during climate change. This may involve the implementation of trade policies that promote the free flow of agricultural goods, the provision of financial and technical support to smallholder farmers, and the development of social safety nets to protect vulnerable populations (Ghalibaf *et al.*, 2022).

Moreover, the employment generated by the agricultural sector can have a multiplier effect on the broader economy, as the income earned by agricultural workers is spent on other goods and services, stimulating economic activity in other sectors (Jagdambe and Kannan, 2020). Also, the agricultural sector has strong linkages with other economic sectors, such as manufacturing, transportation, and services. The demand for agricultural inputs, such as fertilisers, machinery, and financial services, can drive the growth of these supporting industries (Snell, 2020). Additionally, the processing and distribution of agricultural products can create value-added opportunities and spur the development of agro-processing and logistics industries.

However, the relationship between agriculture and economic growth is not always straightforward. The impact of agriculture on economic growth can be influenced by various factors, such as the level of productivity, access to markets, and the availability of supporting infrastructure (Febriyanti *et al.*, 2022). Policymakers and development practitioners must carefully implement targeted interventions to harness the full potential of the agricultural sector as a driver of economic growth and development

## Methods

The methodology employed in this study is comprehensive and rigorous, consisting of a qualitative analysis that is underpinned by an extensive and thorough literature review. The data collection process involved sourcing information from a diverse range of academic sources, financial reports, and statistical analyses. This multi-faceted approach was crucial in ensuring that the research was grounded in solid evidence and that all relevant factors. By drawing on a wide range of sources, including academic literature and financial reports, this study was able to identify key patterns and themes that emerge when markets are faced with crises.

This approach enabled the researchers to gain a deeper understanding of the underlying mechanisms, and to provide valuable insights into how agricultural industries and policymakers can respond effectively to such situations. Overall, the methodology used in this study was robust and thorough.

By delving into various perspectives and approaches within the literature, the researcher will not only gain a deeper comprehension of the topic at hand but will also be able to draw insightful connections between different viewpoints. This comparative analysis can lead to a more comprehensive understanding of the complexities surrounding the subject matter, allowing the researcher to critically evaluate the strengths and weaknesses of each perspective. By being exposed to a diverse range of theories and methodologies, the researcher can develop a more nuanced and well-rounded perspective on the topic, ultimately enhancing the quality and depth of their research. This holistic approach to exploring the literature can lead to more robust and informed conclusions, ultimately contributing to the advancement of knowledge within the field.

## **Analysis/Discussion**

### *Agricultural Trade Potential in ASEAN*

The agricultural industry plays a pivotal role in the economies of the ASEAN (Association of Southeast Asian Nations) region. ASEAN countries, including Indonesia, Malaysia, Thailand, the Philippines, and Vietnam, have a significant agricultural sector that contributes to their overall economic growth and development. This section will explore the agricultural trade and economic impact in the South East Asian region.

According to Hoang (2020), the ASEAN region is a major player in the global agricultural market, with several countries ranking among the world's top producers and exporters of various agricultural commodities. For instance, Indonesia, Malaysia, and Thailand are the world's largest producers and exporters of palm oil, a crucial agricultural product in the region (Saeyang and Nissapa, 2021; Arsyad *et al.*, 2020). The ASEAN region as a whole accounts for a significant portion of the global production and trade of agricultural goods, making it a vital contributor to the global food supply.

The agricultural industry in the ASEAN region has a substantial economic impact, contributing to employment, income generation, and overall economic growth. Mizik *et al.* (2020) found that the ASEAN countries have a high level of agri-food export competitiveness, indicating the region's ability to compete in the global market. This competitiveness is driven by factors such as favourable climatic conditions, abundant natural resources, and a large labour force engaged in the agricultural sector.

Moreover, the agricultural trade within the ASEAN region and with the rest of the world has been a significant driver of economic growth. Hoang (2020) highlights that the intra-ASEAN agricultural trade has increased over the years, reflecting the growing economic integration and cooperation among the member states. This increased trade has facilitated the exchange of agricultural products, technology, and expertise, further strengthening the agricultural sector and its economic impact in the region.

### *Indonesian Market in Agricultural Trade*

The agricultural sector plays a crucial role in Indonesia's economy, contributing significantly to the country's GDP and employment. Indonesia's agricultural trade has been a subject of increasing interest, particularly in the context of the country's growing integration into the global market.

Indonesia's agricultural exports have been dominated by commodities such as palm oil, rubber, and coffee. According to Nurkhoiry (2017), Indonesia is the world's largest producer and exporter of palm oil, accounting for approximately 54% of global palm oil production and 56% of global palm oil exports. The palm oil industry has been a significant contributor to Indonesia's agricultural trade, generating substantial foreign exchange earnings. However, the industry has also faced criticism regarding its environmental impact, leading to increasing pressure from international markets to adopt more sustainable practices (Rifin *et al.*, 2020).

In addition to palm oil, Indonesia's agricultural exports include a diverse range of products, such as coffee, rubber, and spices. Kamaludin *et al.* (2021) note that Indonesia has a comparative advantage in the production of these commodities, which are in high demand in the global market. The country's geographical location, fertile soil, and favourable climate have contributed to its competitiveness in the agricultural sector.

Despite the country's agricultural export potential, Indonesia has also faced challenges in maintaining a positive trade balance. Ibrahim and Mazwan (2020) highlight the structural transformation of the agricultural sector in East Java, Indonesia, which has seen a shift from traditional subsistence farming to a more commercialized and export-oriented model. This transformation has brought about both opportunities and challenges, as the sector grapples with issues such as land fragmentation, limited access to technology, and infrastructure constraints.

The COVID-19 pandemic has further exacerbated the challenges faced by Indonesia's agricultural sector. Amanta and Aprilianti (2020) note that the pandemic has disrupted supply chains, leading to a decline in agricultural exports and a rise in food prices. The government's response to these challenges, including the implementation of trade policies and support measures, will be crucial in shaping the future of the agricultural industry in Indonesia.

### *Malaysian Agricultural Trade Market*

The agricultural industry plays a crucial role in Malaysia's economy, contributing significantly to the country's GDP and export earnings. Malaysia's agricultural trade has been a subject of increasing interest, particularly in the context of the country's efforts to diversify its economic base and enhance its global competitiveness.

Malaysia's agricultural exports have witnessed a steady growth over the years. According to Akhtar and Masud (2022), the palm oil industry alone accounts for a substantial portion of Malaysia's agricultural exports, contributing over 10% to the country's total export earnings. Loo and Harun (2020) provide insights into the impact of direct agricultural investment and cash

transfer on households in Malaysia, particularly in the context of fuel subsidy removal. It suggests that these compensation mechanisms can help mitigate the adverse effects of policy changes on the agricultural sector and support the livelihoods of rural communities.

Furthermore, Xiang and Solaymani (2022) explore the impact of climate change on cereal production in Malaysia, a critical component of the country's agricultural landscape. The agricultural trade landscape in Malaysia is also influenced by broader economic factors, such as exchange rates and commodity prices. Butt *et al.* (2020) investigate the nexus between exchange rates and commodity prices in Malaysia, providing valuable insights into the dynamics that shape the country's agricultural trade performance.

The challenges posed by climatic and economic factors, the Malaysian agricultural industry also faces environmental concerns, particularly in the context of biofuel production. Szulczyk *et al.* (2021) examine the environmental ramifications and economic viability of bioethanol production in Malaysia, highlighting the need for a balanced approach that considers both economic and environmental sustainability. The rubber industry is another important component of Malaysia's agricultural landscape, and Ali *et al.* (2021) explore the dynamics of rubber production in the country, including potential impacts, challenges, and proposed interventions. The study emphasizes the need for a comprehensive strategy to address the issues facing the rubber industry and ensure its long-term competitiveness. Mohd Hanafiah *et al.* (2022) provide a comprehensive analysis of the impact of Malaysian palm oil on the country's sustainable development goals, addressing the co-benefits and trade-offs across various mitigation strategies.

### *Thailand Market Potentials*

Thailand's agricultural industry has favourable climatic conditions, fertile land, and skilled workforce have enabled it to become a major exporter of agricultural products, particularly in the Asia-Pacific region (Cramb and Thepent, 2020). Thailand has been able to capitalize on its comparative advantage in the production of various agricultural commodities, such as rice, rubber, and cassava, to expand its export market (Boonyanam, 2020). According to recent data, Thailand is the world's second-largest exporter of rice, accounting for approximately 25% of the global rice trade (Warr and Suphannachart, 2021). Additionally, the country is a significant producer and exporter of other agricultural products, including sugar, chicken, and fresh fruits and vegetables.

The Thai government has played a crucial role in supporting the agricultural industry's trade activities. Through various policy initiatives, such as the establishment of agricultural economic zones and the promotion of sustainable farming practices, the government has sought to enhance the competitiveness of Thai agricultural products in the global market (Panyasing *et al.*, 2022). Moreover, the government has invested heavily in infrastructure development, including



the improvement of transportation networks and the modernization of agricultural processing facilities, to facilitate the efficient movement of agricultural goods (Moerman, 2021).

Despite the overall success of Thailand's agricultural trade, the sector has also faced several challenges. One of the primary concerns is the extensive use of pesticides in agricultural production, which has led to environmental degradation and potential health risks for farmers and consumers (Laohaudomchok *et al.*, 2020). The government has recognized these issues and has taken steps to promote the adoption of sustainable farming practices, such as organic agriculture, to address these concerns (Panyasing *et al.*, 2022).

Another challenge facing the Thai agricultural industry is the increasing competition from other major producers and exporters in the region, such as Vietnam and Indonesia (Marks, 2022). To maintain its competitive edge, Thailand has had to continuously innovate and adapt its production and marketing strategies to meet the evolving demands of the global market.

## Conclusion

The COVID-19 pandemic has fundamentally altered the dynamics of agricultural trade within the ASEAN region, exposing both vulnerabilities and opportunities for growth. The disruptions in supply chains, coupled with changes in consumer demand and economic uncertainty, have significantly impacted agricultural sectors in countries like Indonesia, Malaysia, and Thailand. The research highlights that these nations, while having considerable potential due to their natural resources and established agricultural industries, face several challenges that could hinder their growth and competitiveness in the global market. Key issues include the need for more sustainable farming practices, the impact of climate change on crop yields, and the increasing competition from other major producers. To navigate these complexities, ASEAN countries must focus on strengthening their agricultural sectors through strategic investments and policy frameworks that enhance resilience and adaptability. Moreover, the study underscores the importance of regional cooperation in developing harmonized trade policies and addressing shared challenges, such as food security and environmental sustainability.

The study recommends a multifaceted approach to overcoming these challenges and maximizing the potential of the ASEAN agricultural sector. Firstly, there is a critical need to improve supply chain resilience by investing in infrastructure and logistics to ensure that agricultural products can reach markets efficiently, even during disruptions. This includes enhancing transportation networks, modernizing agricultural processing facilities, and leveraging digital technologies for better supply chain management. Secondly, promoting sustainable agricultural practices is essential to mitigate environmental impacts and ensure long-term viability. This can be achieved through policies that encourage organic farming, reduce the use of harmful pesticides, and support the development and adoption of climate-resilient crop varieties. Additionally, regional cooperation is crucial for harmonizing trade policies and facilitating the free



flow of agricultural goods across borders, which can help stabilize markets and promote economic integration. Lastly, governments and stakeholders should prioritize support for small-scale farmers by providing financial assistance, technical training, and access to markets. This will enable them to adapt to changing market conditions, increase productivity, and contribute more effectively to the region's agricultural growth. By implementing these strategies, ASEAN countries can enhance their agricultural sectors' resilience, sustainability, and competitiveness in the global market.

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