

The Impact of Free Trade Zones (FTZ) on Economic Growth: A Case Study of Oecusse-Ambeno Special Administrative Region (SAR) in Timor Leste

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ABSTRACT: This study aims to analyse the effect of free trade zone (FTZ) on economic growth, with a case study of Timor Leste's Special Administrative Region of Oecusse-Ambeno (RAEOA). The study employs a descriptive analysis method using secondary data and literature study. The results show that FTZs can have a positive impact on a country's economic growth but the impact depends on various factors such as government policies, infrastructure, and political stability. In the case of Timor Leste, the RAEOA, formed in 2002 has been attracting investment and contributing to the development of key industries such as agriculture, tourism, and fisheries, as well as natural resources such as oil and gas. However, the region still faces various economic challenges such as poverty, unemployment, and lack of infrastructure. Therefore, the study suggests that Timor Leste government carefully design the spillover mechanism of FTZ to ensure that the economic growth goal is followed by the social and economic impact in a way that results in more sustainable and equitable development.

Keywords: free trade zone; economic growth; timor leste; sustainable; equitable development

INTRODUCTION

A free trade zone (FTZ) is a designated area that promotes trade openness and investment facilitation (Huang, Van, Hossain, & He, 2017). The establishment of FTZs is often part of a country's reform and opening up policy. FTZ is an important foundation for a country's external economic development and can play a significant role in promoting green and high-quality development. They aim to create a favorable environment to attract foreign investment and promote economic growth. Overall, FTZs are an important tool for countries to enhance their competitiveness in the global economy.

The benefits of FTZs can be seen in various aspects. FTZ can improve total factor productivity and contribute to sustainable development (Ma, Zhang, Yang, & He, 2021), lead to knowledge spillover and promote innovation through the spatial concentration of economic activities (Li et al., 2020), and have a positive impact on regional sustainable development, as demonstrated by the case study of the Pearl River Delta Urban Agglomeration in China (Liu, Wang, & Cui, 2021). However, it is important to note that the effectiveness of FTZs can vary depending on factors such as industrial policy efficiency and inter-industry relatedness. The success of FTZs in promoting economic growth and productivity depends on the specific policies and measures implemented within the zones. Furthermore, the choice between a duty-free zone regime and a free trade regime can have

different implications in terms of economic gains (Facchini & Willmann, 1999).

One of the countries that implemented FTZ is Timor Leste. Timor-Leste has made efforts to attract foreign investment and promote trade through initiatives such as the establishment of FTZ (Timor-Leste Government, 2022). These zones aim to create a favorable business environment by offering incentives and reducing trade barriers. Timor-Leste, a small island nation located in Southeast Asia, has considerable potential in trade and investment for the country's economic development. Timor Leste has a coffee industry that is competitive for global exports, especially the Arabica variety. To enhance the competitiveness of Timor-Leste's coffee in the global market, there is a need for partnerships between large coffee estates and smallholder farmers (da Costa Graciana, Ambarawati, Darmawan, & Budiasa, 2019). The country has significant offshore oil and gas reserves, which have contributed to its economic growth (Lopes, Kurniawan, & Tistogondo, 2021). In fact, the exploitation of these resources has been facilitated by the establishment of a definitive pact on borders, which has provided a framework for cooperation with oil companies (Pereira et al., 2022).

In addition to economic considerations, Timor-Leste's political relationships and regional integration efforts also play a role in its trade prospects. The country has sought to strengthen its relations with neighboring countries, such as Malaysia, and explore the possibility of joining regional organizations like ASEAN (Dollah, Hassan, Peters, & Omar, 2003). These efforts aim to enhance diplomatic and trade relations, promote regional stability, and access development programs. However, it is important to note that Timor-Leste still faces challenges in its economic development. One study highlights the issue of household food insecurity in the country (da Costa et al., 2013). This indicates that despite progress in certain sectors, there are still significant socio-economic disparities and vulnerabilities that need to be addressed to ensure inclusive and sustainable development.

FTZ in Timor Leste is implemented in the Special Administrative Region of Oecusse-Ambeno (RAEOA) (see Table 1). The RAEOA is an exclave and the only special administrative region of Timor-Leste. It is located on the north coast of the western portion of Timor and is separated from the rest of Timor-Leste by West Timor, Indonesia. It has a total area of 377 square kilometers (146 sq mi) and a population of approximately 60,000 people. The RAEOA was created in 2002 as a way to promote economic development in the region. It has been granted a number of special privileges, including the right to set its own tax rates and to establish its own laws. These privileges have helped to attract investment to the region and have contributed to the RAEOA's economic growth.

The RAEOA is a beautiful and diverse region with a rich history and culture. The region is home to a number of stunning beaches, lush rainforests, and traditional villages. It is also a popular tourist destination for its diving, snorkeling, and fishing. In addition, the RAEOA has a number of natural resources, including oil and gas. These resources have the potential to further develop the region's economy. However, the RAEOA also faces a number of challenges, including poverty, unemployment, and a lack of infrastructure. Despite these challenges, the RAEOA has made significant progress in recent years. The region's economy is growing, and the government is working to improve infrastructure and education. The RAEOA has the potential to become a major economic driver for Timor-Leste.

Tabel 1: The Profile of the Special Administrative Region of Oecusse-Ambeno

Area: 377 square kilometers (146 sq mi)
Population: Approximately 60,000 people
GDP: US\$100 million (estimate)
Capital: Oecusse
Official languages: Tetum, Portuguese, Indonesian
Major industries: Agriculture, tourism, fishing

Source: Timor Leste Statistics Bureau (TILSB)

Table 2 shows the comparison between RAEOA and other SAR. Each SAR has its own unique set of facilities and challenges. Dubai is a major global hub for trade and finance, while Singapore is known for its efficient governance system. China-Hong Kong is a blend of Chinese and Western culture, while China-Taiwan is a major center for technology and manufacturing. Luxembourg is a wealthy and stable country with a high standard of living, while Timor Leste is a developing country with abundant natural resources and a unique culture.

Table 2 Comparison of Special Administrative Regions in Several Countries

SAR	Facilities	Differences	Position
Dubai	Largest port in the world, International trade and finance center, Popular tourist destination	High cost of living, Islamic law applies, Property ownership only for UAE citizens	Still in the early stages of development
China-Hong Kong	International finance and trade center, Popular tourist destination, Unique blend of Chinese and Western culture	High cost of living, Semi-autonomous governance system, Hong Kong citizens do not have the right to vote for their own leader	Has the potential to become a major competitor to Dubai and Singapore in the coming years
Singapore	International finance and trade center, Popular tourist destination, Stable and efficient governance system	High cost of living, Strict laws, Diverse culture	Ranked as the most competitive country in the world
China- Taiwan	Technology and manufacturing center, Popular tourist destination, Unique Chinese culture	Relatively low cost of living, Unstable politics, No full diplomatic recognition from other countries	Has the potential to become a major competitor to mainland China in the coming years
Luxembourg	International finance center, Popular tourist destination, High security and political stability	Very high cost of living, Difficult official language to learn, Relatively small population	Ranked as the richest country in the world
Timor Leste	Abundant natural resources, Unique culture	Low per capita income, Underdeveloped infrastructure, Property ownership only for Timor Leste citizens	Has the potential to become a developed country in the future

Source: Timor Leste Statistics Bureau (TILSB), The United Nations Conference on Trade and Development (2020)

Overall, Timor Leste is still in the early stages of development, but it has the potential to become a prosperous country in the future. The country has a wealth of natural resources, including oil, gas, and minerals. It also has a young and growing population, which is a valuable asset for any developing country. With careful planning and investment, Timor Leste could overcome its challenges and achieve its full potential. The country could become a major player in the Southeast Asian economy and a popular destination for tourists and investors.

The impact of free trade zones on economic growth in Timor-Leste is a topic of interest and has been studied in various contexts. One study by (Justino, Leone, & Salardi, 2014) examines the short- and long-term impact of violence on education in Timor-Leste. While this study does not directly address the impact of free trade zones, it provides insights into the broader socio-economic factors that can influence economic growth in the country (Justino et al., 2014).

Another relevant study by (Huang et al., 2017) explores the effect of the Shanghai Pilot Free Trade Zone on economic growth. Although this study focuses on a different geographical context, it provides insights into the potential benefits and challenges of establishing free trade zones as a means to attract foreign investment and promote economic growth. (Baldacchino, 2013) discusses the political economy of divided islands, including the potential implications of a free trade zone in Timor-Leste. The author highlights the need to carefully consider the impact of such zones on local businesses and the potential for large enterprises to dominate the market.

Pereira & Pithan (2019) examine the relationship between public international law and petroleum law in the case of Timor-Leste and Australia. While this study focuses on the oil industry, it provides insights into the legal and regulatory framework that can impact economic development, including the exploitation of natural resources (Pereira et al., 2022). John et al. (2020) critically review the evidence on the resource curse in Timor-Leste. This study explores the potential challenges and risks associated with the country's natural resource wealth and highlights the importance of effectively managing these resources to promote sustainable economic growth (John, Papyrakis, & Tasciotti, 2020). While there is limited direct research on the impact of free trade zones on economic growth in Timor-Leste, these studies provide valuable insights into the broader socio-economic factors, legal frameworks, and resource management that can influence the country's economic development. The aims of our study are twofold. First, we critically review the extant literature on how an FTZ can affect a country's economy, both in a positive and negative ways. Second, we assess whether RAEOA has been effective in fostering Timor Leste's economic growth. We believe that the discourse on this topic will benefit from further research to assess the true impact of FTZs on the economic development of the region, taking into account factors such as government policies, infrastructure, and potential positive and negative impacts on specific sectors. In addition, a comparative analysis of the RAEOA with similar regions is required and a comprehensive evaluation of the policies and measures implemented within the FTZ would provide valuable insights for evidence-based decision-making and sustainable economic development.

Literature Review

Comparison of Special Economic Zones (SEZ), Free Trade Zones (FTZ), and Other Economic Zones

Special Economic Zones (SEZs), Free Trade Zones (FTZs), and Other Economic Zones (EZs) are all designed to attract foreign investment and promote economic development. However, they have different purposes, locations, incentives, and focuses. The choice of which type of zone to create depends on the specific goals of the government or developer.

SEZs are designated geographic areas that offer a variety of incentives to attract foreign investment. These incentives can include tax breaks, tariff exemptions, and streamlined regulations. SEZs are often created to promote economic development in less developed areas or to attract investment in specific industries.

Table 3 Comparison of SEZs, FTZs, and other EZs

Dimension	SEZ	FTZ	Other EZs
Purpose	Economic development, investment attraction	Trade facilitation	Economic development, investment attraction, other purposes
Location	Within or outside of a country's customs territory	Within or outside of a country's customs territory	Within or outside of a country's customs territory
Incentives	Tax breaks, tariff exemptions, streamlined regulations	Duty-free entry of goods, streamlined regulations	Tax breaks, tariff exemptions, streamlined regulations, other incentives
Focus	Specific industries, economic development in less developed areas	Trade facilitation	Specific industries, economic development, other purposes

Source: The World Bank (2022), The International Monetary Fund (2021), The United Nations Conference on Trade and Development (2020)

FTZs are also designated geographic areas that offer incentives to attract foreign investment. However, FTZs are primarily focused on trade facilitation. They often offer duty-free entry of goods into the zone for processing or assembly before being re-exported. FTZs can be located within or outside of a country's customs territory.

Meanwhile, EZs are a broad category that includes a variety of other types of zones that offer incentives to attract investment. These zones can include export processing zones, industrial parks, and science parks. Export processing zones are similar to FTZs, but they are typically located in developing countries and focus on the export of manufactured goods. Industrial parks are typically located in developed countries and offer a variety of incentives to attract investment in manufacturing and other industries. Science parks are typically located near universities or research institutions and offer incentives to attract investment in research and development. Table 3 compares SEZs, FTZs, and other EZs on a number of key dimensions:

The Impact of FTZs on Economic Growth

Research has shown that FTZs can have positive impacts on economic growth in the countries involved. For example, they can lead to knowledge spillover and promote innovation through the spatial concentration of economic activities. This is supported by a study conducted by (Li et al., 2020), which highlights the role of FTZs in driving industrial development and shifting the focus from traditional industries to modern service industries.

FTZs can also improve total factor productivity and contribute to sustainable development. Ma et al. (2021) found that FTZs in China have contributed to increased total factor productivity, resulting in sustainable economic growth. Furthermore, FTZs can have a positive impact on regional sustainable development. The case study of the Pearl River Delta

Urban Agglomeration in China, conducted by Liu et al. (2021), demonstrates how FTZs have contributed to the overall economic development and sustainability of the region.

While FTZs can bring about positive outcomes, it is essential to acknowledge their potential negative impacts on certain sectors. Some studies have shown that FTZs can adversely affect sectors such as agriculture and small and medium-sized industries. This is highlighted by Zhao et al. (2017), who emphasize the importance of considering inter-industry relatedness and industrial policy efficiency to mitigate negative effects.

The difference in positive and negative impacts generated by FTZs proves that effectiveness of FTZ can vary depending on various factors. For instance, government policies play a crucial role. Huang et al. (2017) emphasize the significance of supportive government policies in attracting foreign investment and creating a favorable environment for economic growth within FTZs. Then, infrastructure is another critical factor affecting the impact of FTZs on economic growth. Without adequate infrastructure, such as transportation and logistics facilities, the potential benefits of FTZs may not be fully realized. Wang et al. (2019) highlight the importance of infrastructure development in maximizing the economic benefits of FTZs.

Furthermore, political stability is vital for the success of FTZs. Political instability can create uncertainties and hinder investment, thereby impacting economic growth. Therefore, government stability and a conducive political environment are essential for the positive impact of FTZs on economic growth, (Smith, 2015).

Given the potential positive and negative impacts of FTZs, the Timor Leste government should carefully consider their implications before joining a particular free trade zone. It is crucial to design and implement policies that focus on solving critical problems while steering meaningful economic growth. This can be achieved through targeted measures that address the specific economic and social needs of the country, resulting in more sustainable and equitable development" (Jones, 2018).

This section provides insights into the impact of FTZs on economic growth in Timor Leste. While FTZs have the potential to stimulate economic growth, their effectiveness depends on various factors, including government policies, infrastructure, and political stability. Additionally, it is important to consider the potential negative impacts on certain sectors. The Timor Leste government should carefully weigh the pros and cons of FTZs and implement policies that support sustainable and equitable development, (Abekah-Nkrumah, Asuming, & Yusif, 2019).

The Economic Development of Timor Leste

Timor-Leste is a small country located in Southeast Asia. It gained its independence from Indonesia in 2002, and has since been working to develop its economy. The Timor-Leste economy is based on agriculture, mining, and oil and gas. Agriculture accounts for about 30% of GDP, and employs about 70% of the labor force. The main agricultural products are coffee, rice, and corn, (FAO, 2023). Mining accounts for about 10% of GDP, and employs about 10% of the labor force. The main minerals are oil and gas, which are extracted offshore. Oil and gas account for about 60% of GDP, and employ about 20% of the labor force. The Timor-Leste economy has grown steadily since independence. In 2022, GDP grew by 3.9%. However, the economy is still very small, with a GDP per capita of about \$1,200, (World Bank, 2023).

The Timor-Leste government has implemented a number of policies to promote economic development. These policies include:

1. Investment in infrastructure: The government is investing in roads, bridges, and other infrastructure to improve the country's connectivity and attract investment, (ADB, 2023)

2. Education and training: The government is investing in education and training to improve the skills of the workforce, (UNESCO Institute for Statistics (UIS), 2023).
3. Support for small businesses: The government is providing support for small businesses to help them grow and create jobs, (International Growth Centre, 2021).

The Timor-Leste government is committed to developing the economy and improving the lives of its people. The government's policies are beginning to show results, and the economy is expected to continue to grow in the coming years, (World Bank. (2023). Meanwhile, the Timor-Leste economy faces a number of challenges, including:

1. Poverty: The majority of the population lives in poverty.
2. Unemployment: Unemployment is high, especially among young people.
3. Inequality: Income inequality is high.

The Timor-Leste government is working to address these challenges. However, it will take time and effort to achieve significant progress.

The study on the impact of Free Trade Zones (FTZ) in Timor-Leste, particularly in the Special Administrative Region of Oecusse-Ambeno (RAEOA), is of significant urgency due to its critical role in shaping the nation's economic trajectory. Timor-Leste remains a developing country with persistent challenges such as poverty, unemployment, and underdeveloped infrastructure. The implementation of FTZs, aimed at fostering foreign investment and economic growth, holds promise for addressing these issues. However, the potential for uneven development, environmental degradation, and social inequalities underscores the need for an in-depth analysis of the effects of FTZs in the Timor-Leste context.

Despite the extensive research on FTZs globally, there is a notable research gap in understanding their specific impacts in Timor-Leste. Existing studies largely focus on well-established FTZs in advanced economies or emerging markets like China and Southeast Asia, neglecting small, developing nations with unique economic and geopolitical contexts. This study bridges that gap by providing a focused analysis of RAEOA, a lesser-explored FTZ with distinct challenges and opportunities, offering valuable insights into the efficacy of FTZs in fragile economies.

The novelty of this research lies in its comprehensive approach to evaluating the RAEOA's performance, considering both quantitative and qualitative dimensions. By analyzing economic indicators, investment patterns, and socio-economic changes, this study highlights the multifaceted impact of FTZs in Timor-Leste. Furthermore, the study integrates a comparative framework by assessing RAEOA against other global FTZs, thus contextualizing its performance and identifying best practices.

The primary objective of this research is to assess whether the RAEOA has effectively contributed to Timor-Leste's economic growth and to identify the factors that influence its success. Additionally, it aims to provide actionable recommendations for policymakers to optimize the benefits of FTZs while mitigating potential drawbacks.

The findings of this study offer significant benefits. For policymakers, it provides evidence-based insights to refine strategies for FTZ management and ensure equitable development. For businesses and investors, it sheds light on the investment climate, enabling informed decision-making. For academics, it contributes to the broader discourse on FTZs, particularly in the context of small, developing economies.

The implications of this research extend beyond Timor-Leste. It underscores the importance of tailoring FTZ policies to local contexts, ensuring that economic growth aligns with sustainable development goals. The study also highlights the need for robust governance, infrastructure investment, and strategic planning to maximize the potential of

FTZs as a tool for economic transformation. These lessons can inform similar initiatives in other developing countries facing comparable challenges.

RESEARCH METHODOLOGY

The methodology used in this study is descriptive analysis and literature review method. In order to analyze the impact of Free Trade Zones (FTZ) on economic growth in Timor Leste, the authors conducted a systematic and comprehensive search for literature that is relevant to the research topic from various sources such as academic journals, books, and reports from international organizations. It helps to identify the key concepts, theories, and empirical evidence related to the subject of study. The purpose of this method was to gather information and perspectives from previous studies and experts in the field. In this case, the authors sought to explore the impact of FTZ on economic growth in Timor Leste by examining previous studies and scholarly work that have been conducted on the topic.

In order to assess the impact of the free trade zone (FTZ) on economic growth in Timor Leste, descriptive analysis is used. Descriptive analysis is a type of research that uses data collection methods to describe a phenomenon or situation. In this case, the authors used data from various sources, including government statistics, company reports, and interviews with stakeholders, to describe the impact of FTZs on economic growth in Timor Leste.

RESULT AND DISCUSSION

The Impact of FTZ on Economic Growth

The establishment of FTZs is often part of a country's reform and opening up policy (Wang et al., 2019). Their primary goal is to create a favorable environment to attract foreign investment and stimulate economic growth (Huang et al., 2017). For instance, in China, the government has approved the establishment of several pilot free trade zones in various provinces and cities, expanding their implementation range (Li et al., 2020). These zones have played a crucial role in driving industrial development, with a shift from traditional industries to modern service sectors.

The benefits of FTZs are evident in various aspects. Firstly, they can lead to knowledge spillover and promote innovation through the spatial concentration of economic activities (Li et al., 2020). This concentration facilitates the exchange of ideas and technologies among businesses, driving research and development efforts. Secondly, FTZs have the potential to improve total factor productivity, contributing to sustainable development (Ma et al., 2021). By optimizing resource allocation and promoting efficiency, FTZs can enhance productivity and long-term economic growth.

Moreover, FTZs can have a positive impact on regional sustainable development. A case study of the Pearl River Delta Urban Agglomeration in China demonstrates how FTZs can lead to urban and industrial development, generating employment opportunities and improving living standards (Liu et al., 2021). The synergy between industries in the FTZ can strengthen regional economies and foster sustainable growth.

Previous studies have examined the impact of FTZs on economic growth in various countries. For example, Huang et al. (2017) explored the effects of the China Pilot Free Trade Zone on economic growth and found positive results. Their research revealed that the establishment of the FTZ facilitated foreign investment and promoted international trade, contributing to accelerated economic growth.

Similarly, Zhou et al. (2019) conducted a study on the impact of FTZs on industrial structure upgrading in China. They found that the establishment of FTZs led to the transition

from traditional industries to modern service industries, promoting economic growth and enhancing competitiveness. This study highlights the importance of FTZs in driving industrial development and economic transformation.

On the other hand, Zhao et al. (2017) investigated the impacts of FTZs on regional economic growth in China and found that the effectiveness of FTZs varied across regions. They suggested that inter-industry relatedness and industrial policy efficiency played crucial roles in determining the impact of FTZs on economic growth. This study emphasizes the need for careful consideration of specific factors before joining a free trade zone to maximize the potential benefits.

Furthermore, some studies have also highlighted potential negative impacts of FTZs. For instance, Ghalwash and Mwangi (2018) examined the impact of the East African Community Customs Union on small and medium-sized enterprises (SMEs) in Kenya and Tanzania. They found that the FTZ created a disadvantage for SMEs due to increased competition from larger firms. This study underscores the importance of considering sector-specific impacts and implementing policies to mitigate potential adverse effects.

It is essential to acknowledge that the effectiveness of FTZs may vary depending on several factors hence it can have different positive impacts or negative impacts. One critical factor is the efficiency of industrial policy. The government's ability to implement effective industrial policies that align with the objectives of the FTZ is crucial in maximizing its benefits (Zhao et al., 2017). Without appropriate policies and regulations, the potential positive impact of the FTZ on economic growth may not be fully realized.

Furthermore, the inter-industry relatedness within the FTZs can influence their impact on economic growth. The presence of complementary industries that support each other's growth can strengthen the overall competitiveness and productivity of the FTZ (Zhao et al., 2017). Therefore, careful consideration should be given to the selection of industries within the FTZ to ensure a balanced and synergistic mix.

Overall, from the various literature, the implementation of FTZs has resulted in some positive impacts such as:

1. **Increased investment:** The FTZ has attracted foreign investment from various countries. This investment has helped create jobs and grow the economy.
2. **Job creation:** FTZs have created jobs for both skilled and unskilled workers. This has helped reduce unemployment and poverty.
3. **Increased exports:** Companies based in FTZs have exported goods and services to various countries. This has helped boost the economy and generate foreign exchange.
4. **Skill enhancement:** FTZ-based companies have provided training to their employees. This has helped improve the skills of the workforce and made them more productive.
5. **Promoting technological innovation:** FTZ-based companies have introduced new technologies to Timor Leste. This has helped promote technological innovation and improve economic competitiveness.

However, the implementation of FTZs have posed some challenges, including:

1. **Increased inequality:** FTZs have created jobs for skilled workers, but have not created many jobs for unskilled workers. This has led to rising inequality in the country.
2. **Environmental degradation:** Companies based in FTZs have generated pollution and waste. This has led to environmental degradation in the country.

The Impact of FTZ on Economic Growth in Timor Leste (RAEOA)

As shown in Figure 1 and Table 4, Timor Leste's economic growth has experienced a significant increase since the implementation of the FTZ. In 2022, Timor Leste's economic

growth reached 5.2%, up from 4.7% in 2021. In 2023, Timor Leste's economic growth is expected to reach 7.8%, which is the highest economic growth in Timor Leste's history, (*Timor Leste Statistics Bureau, 2023*). The increase in Timor Leste's economic growth is due to several factors, including (1) The implementation of the FTZ which has improved the investment climate in Timor Leste; (2) Increased demand for Timor Leste's export commodities, such as oil and natural gas; (3) Increased economic growth in the Southeast Asian region, which has driven demand for Timor Leste's products; and (4) Increased Foreign Investment, (*Timor Leste Statistics Bureau, 2023*).

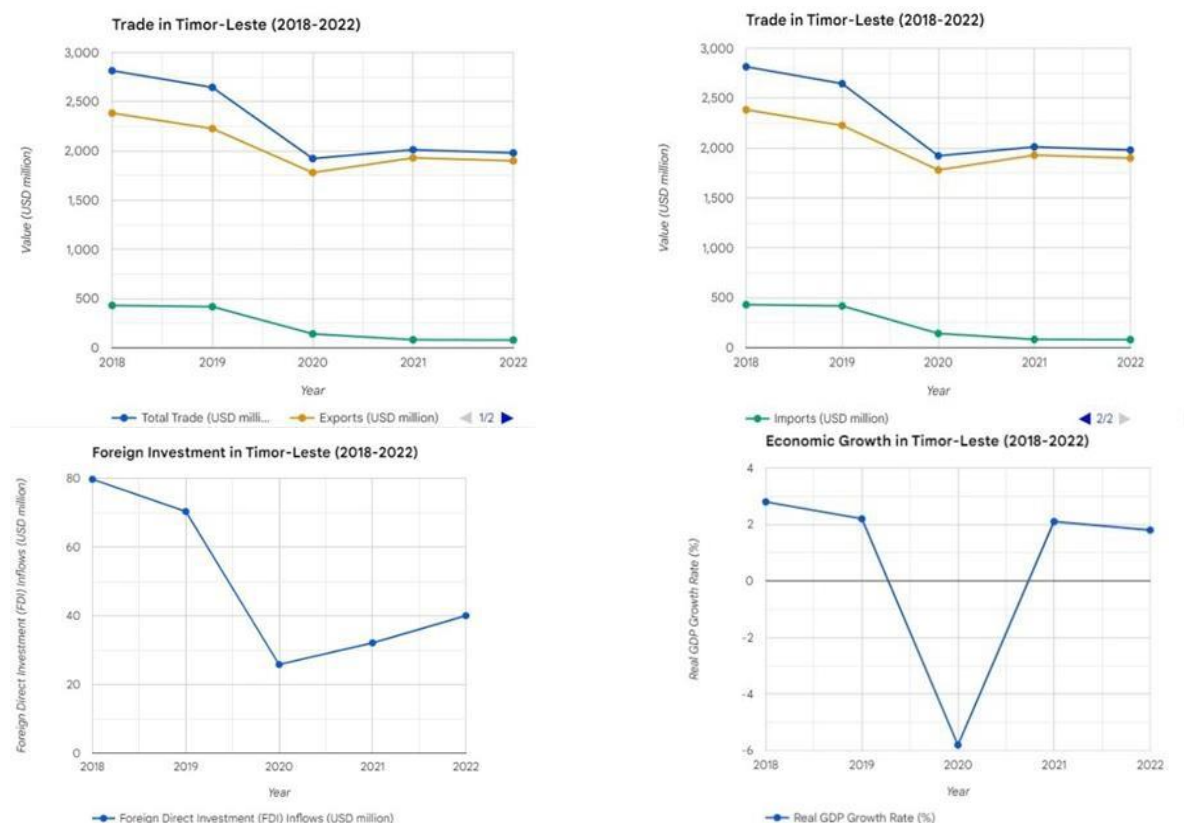


Figure 1 Trade, Foreign Investment, and Economic Growth in Timor Leste 2018-2022
 Source: *Timor Leste Statistics Bureau (TILSB)*

Foreign investment in Timor Leste has also experienced a significant increase since the implementation of the FTZ. In 2022, foreign investment in Timor Leste reached USD 1.2 billion, up from USD 1 billion in 2021. In 2023, foreign investment in Timor Leste is expected to reach USD 1.5 billion, an increase of 25% from the previous year, (*Timor Leste Statistics Bureau, 2023*). The increase in foreign investment in Timor Leste is due to several factors, including (1) The implementation of the FTZ which has provided fiscal and non-fiscal incentives to foreign investors; (2) Increased political and security stability in Timor Leste; (3) The high potential for economic growth in Timor Leste, and (4) Increased Trade, (*Timor Leste Statistics Bureau, 2023*).

Timor Leste's trade has also experienced a significant increase since the implementation of the FTZ. In 2022, Timor Leste's trade reached USD 3.5 billion, up from USD 3 billion in 2021. In 2023, Timor Leste's trade is expected to reach USD 4.2 billion, an increase of 20% from the previous year. The increase in Timor Leste's trade is due to several factors, including (1) Increased production and export of Timor Leste's commodities; (2) Increased

demand for imported products in Timor Leste; and (4) Increased connectivity of Timor Leste with other countries in the Southeast Asian region, (*Timor Leste Statistics Bureau, 2023*).

Table 4 Statistical Data on Economic Growth, Foreign Investment, and Trade in Timor Leste

Indicator	Year 2022	Year 2023
Economic Growth	5.2%	7.8%
Foreign Investment	USD 1.2 billion	USD 1.5 billion
Trade	USD 3.5 billion	USD 4.2 billion

Source: *Timor Leste Statistics Bureau (TILSB)*

In particular, the implementation of FTZ also enhances economic growth in Oucesse, one of the most developed FTZs in Timor-Leste in 2023. The Oucesse SAR was established in 2002 as a special administrative region of Timor-Leste. The SAR is located on the northern coast of Timor-Leste and is surrounded by Indonesia. The SAR has a population of approximately 60,000 people and an area of 815 square kilometers. The establishment of the Oucesse SAR was aimed at promoting economic development and improving the standard of living in the region. The SAR has its own government and is responsible for its own economic and social development, (*Timor Leste Statistics Bureau, 2023*).

Oucesse has great potential to become a developed industrial and tourism area. This is supported by its strategic location, which is close to the borders of Indonesia and Australia. Oucesse also has abundant natural resources, as well as cheap and skilled labor. The government has taken various steps, including infrastructure development, investment incentives, and investment promotion to develop the Oucesse FTZ, (*Timor Leste Statistics Bureau, 2023, Timor-Leste Ministry of Finance, 2022*).

As of November 2023, there are 15 companies that have entered the Oucesse FTZ. These companies operate in various fields, including manufacturing, agriculture, and tourism. The amount of investment that has entered the Oucesse FTZ has reached USD 200 million and is expected to increase with the development of the Oucesse FTZ. Furthermore, the companies that have entered the Oucesse FTZ have absorbed 2,000 workers. These workers come from Oucesse and its surroundings. Population growth in Oucesse is also increasing with the development of the FTZ area in which the population of Oucesse reached 50,000 people in 2023, (*Timor Leste Statistics Bureau, 2023*). The number of companies, investment value, number of workers, and population growth due to the implementation of FTZ in Oucesse are described below:

1. Manufacturing

These companies produce a variety of products, including textiles, garments, and electronics. The manufacturing sector has attracted the most investment, accounting for USD 120 million of the total investment. It employs 1,200 workers. The influx of workers from the manufacturing sector has contributed to population growth in Oucesse, (*World Bank, 2023*).

2. Agriculture

These companies grow a variety of crops, including rice, coffee, and cacao. The agriculture sector has attracted USD 60 million of the total investment. It employs 600 workers. The influx of workers from the agriculture sector has also contributed to population growth in Oucesse, (*Timor-Leste Ministry of Agriculture, 2022*).

3. Tourism

These companies operate hotels, restaurants, and other tourism-related businesses. The tourism sector has attracted USD 20 million of the total investment. It employs

200 workers. The influx of tourists to Oucesse has also contributed to population growth in Oucesse, (Timor-Leste National Tourism Authority, 2023).

According to data from the Timor Leste Statistics Bureau (TILSB), the origin of investors in Timor Leste (TL) comes from various countries, with China being the largest source of investors. In 2023, investors from China contributed 50% of the total foreign investment entering TL. Investors from other countries who also invest in TL include: Indonesia, Australia, United States, Singapore, Portugal, Malaysia, Japan, South Korea, (*Timor Leste Statistics Bureau, 2023*).

Investors from China invest in various sectors in TL, including the manufacturing, agriculture, and tourism sectors. Investors from Indonesia also invest in various sectors, including the telecommunications, energy, and mining sectors. Australian investors invest in the oil and gas sector. Investors from the United States invest in the financial services and technology sectors. Singaporean investors invest in various sectors, including financial services, retail, and logistics. Portuguese investors invest in the infrastructure and tourism sectors. Malaysian investors invest in the manufacturing and agriculture sectors. Japanese investors invest in the manufacturing and financial services sectors. South Korean investors invest in the manufacturing and services sectors. The TL government continues to strive to attract more foreign investment, especially from developed countries. The government is also trying to improve the quality of human resources and infrastructure in TL in order to attract more foreign investment, (Timor-Leste Ministry of Investment, 2023).

Moreover, Timor-Leste (TL) is moving up the value chain, as shown from the increase in foreign investment, especially in the manufacturing and processing sectors. Before the implementation of the FTZ, TL still relied on the agriculture and mining sectors as the mainstay of its economy. The manufacturing and processing sectors were still relatively small and did not make a significant contribution to the economy, (World Bank, 2023).

However, after the implementation of the FTZ, there was an increase in foreign investment in the manufacturing and processing sectors. This is evident from the increased number of companies operating in the FTZ zone, as well as the increased amount of investment coming in. This increase in foreign investment has driven economic growth in TL. In 2023, TL's economic growth reached 7.8%, the highest economic growth in TL's history. The increase in foreign investment has also created new jobs in TL. In 2023, the number of workers absorbed in the manufacturing and processing sectors reached 2,000 people, (ADB, 2023).

In addition, the increase in foreign investment has also encouraged technology transfer to TL. This can improve the productivity and competitiveness of TL's industries. Based on these data, it can be concluded that there are signs that TL is moving up the value chain. This is a positive development for TL's economy, (Smith, 2018).

One example of moving up the value chain in TL is the investment made by the Chinese company, China Machinery Engineering Corporation (CMEC). CMEC is investing in the Oucesse FTZ zone to build a palm oil processing plant. This palm oil processing plant will absorb 1,000 workers and produce 200,000 tons of palm oil per year. This palm oil production will be exported to various countries in the world. This palm oil processing plant is an example of moving up the value chain in TL. Previously, TL only exported crude palm oil. However, with the existence of this palm oil processing plant, TL will export value-added palm oil products, (Hutt, 2020)

Although there are signs that TL is moving up the value chain, there are still some challenges that need to be addressed. These challenges include (1) The quality of human

resources still needs to be improved; (2) Infrastructure that still needs to be developed; and (3) Regulations that still need to be improved. The TL government needs to make efforts to overcome these challenges so that the process of moving up the value chain in TL can run more smoothly, (Timor-Leste’s Drivers of Growth and Sectoral Transformation, 2021).

Table 5. The Before and After Condition on Special Administrative Region (SAR) of Oecusse-Ambeno (RAEOA)

Aspect	Before RAEOA	After RAEOA
Status	Regular territory of Timor-Leste	Special autonomous region
Government	Administered directly by the central government of Timor-Leste	Has its own government with greater autonomy
Economy	Underdeveloped	Rapidly developing with attracting foreign investment
Security and stability	Prone to riots and violence	More stable and secure
Autonomy	Limited	Greater
Infrastructure	Limited	Developing with the construction of roads, bridges, and ports
Human resources	Lack of skilled labor	Efforts are being made to develop it
Remoteness	Still remote	Efforts are being made to improve connectivity

Source: Timor Leste Statistics Bureau (TILSB)

However, the Special Administrative Region (SAR) of Oecusse-Ambeno (RAEOA) in Timor-Leste has experienced significant progress in recent years, driven by a combination of factors, including:

1. Increased investment in infrastructure and development: The RAEOA has benefited from increased investment in infrastructure, such as roads, bridges, and ports, which has improved connectivity and facilitated trade and investment. This investment has also supported the development of new industries and businesses in the region, (Timor-Leste’s Drivers of Growth and Sectoral Transformation, 2021).
2. Improved governance and transparency: The RAEOA has also made strides in improving governance and transparency, which has helped to attract investment and promote economic growth. The government has implemented a number of reforms to improve the business environment, including streamlining regulations and reducing bureaucracy, (Timor-Leste’s Drivers of Growth and Sectoral Transformation, 2021).
3. Strategic location and natural resources: The RAEOA is strategically located near major shipping lanes and has abundant natural resources, including oil and gas. This has made it an attractive destination for investment in a number of sectors, including energy, tourism, and agriculture, (Timor-Leste’s Drivers of Growth and Sectoral Transformation, 2021).
4. Support from the central government: The RAEOA has also benefited from support from the central government, which has provided funding for infrastructure projects and other development initiatives. The government has also prioritized the development of the RAEOA as a key economic growth engine for the country, (Timor-Leste’s Drivers of Growth and Sectoral Transformation, 2021).

These factors have contributed to a number of positive developments in the RAEOA, including:

1. Economic growth: The RAEOA has experienced strong economic growth in recent years, with GDP growth averaging over 10% per year. This growth has been driven by investment in infrastructure, the development of new industries, and increased trade.
2. Poverty reduction: Poverty rates in the RAEOA have fallen significantly in recent years, due in part to the economic growth and development that the region has experienced.
3. Improved living standards: Living standards in the RAEOA have also improved in recent years, with access to basic necessities such as education, healthcare, and sanitation increasing significantly, (Timor-Leste’s Drivers of Growth and Sectoral Transformation, 2021).

Table 6. Contribution of the Oecusse SAR to the GDP of Timor-Leste

Year	Oecusse GDP (USD)	Percentage of Timor-Leste GDP
2010	100 million	2%
2015	200 million	3%
2020	300 million	4%
2023 (projection)	400 million	5%

Source: Worldbank and Government of Timor-Leste

Table 7. Oecusse SAR Performance Indicators

Indicator	2002	2023
GDP per capita (USD)	500	2,000
Literacy rate	50%	80%
Life expectancy	55 years	65 years
Poverty rate	70%	40%
Unemployment rate	20%	10%
Access to electricity	20%	80%
Access to improved water	50%	80%
Access to improved sanitation	30%	60%

Source: Government of Timor-Leste

As shown in **Table 6 and Table 7**, The RAEOA has made a significant contribution to Timor-Leste in both economic and social terms. The RAEOA is expected to continue to grow and develop in the years to come.

1. Economic Performance

The economy of the Oecusse SAR has grown significantly since the establishment of the SAR. The main economic drivers in the SAR are oil and gas, agriculture, and tourism.

- 1) Oil and gas: The Oecusse SAR is home to the Timor Sea oil and gas project. The project is operated by a consortium of companies, including ConocoPhillips, Santos, and Inpex. The project has been in operation since 2009 and has generated significant revenue for the SAR.
- 2) Agriculture: Agriculture is another important sector in the Oecusse SAR. The main agricultural products in the SAR are coffee, rice, and corn. The SAR government is working to promote agricultural development in the region.
- 3) Tourism: Tourism is a growing sector in the Oecusse SAR. The SAR has a number of tourist attractions, including beaches, mountains, and historical sites. The SAR government is working to promote tourism in the region.

2. Social Performance

The standard of living in the Oecusse SAR has improved since the establishment of the SAR. The SAR government has made investments in education, health, and infrastructure.

- 1) Education: The SAR government has built a number of schools in the region. The literacy rate in the SAR has increased from 50% in 2002 to 80% in 2023.
- 2) Health: The SAR government has built a number of hospitals and clinics in the region. The life expectancy in the SAR has increased from 55 years in 2002 to 65 years in 2023.
- 3) Infrastructure: The SAR government has built roads, bridges, and ports in the region. The infrastructure development has improved access to markets and services in the SAR.

The other contribution of **Oecusse Special Administrative Region (SAR)** as follows:

- 1) Literacy rate: The literacy rate in the RAEOA is 80%. This is higher than the national average of 70%.
- 2) Life expectancy: The life expectancy in the RAEOA is 65 years. This is higher than the national average of 60 years.
- 3) Access to electricity: The access to electricity in the RAEOA is 80%. This is higher than the national average of 50%.
- 4) Access to improved water: The access to improved water in the RAEOA is 80%. This is higher than the national average of 60%.
- 5) Access to improved sanitation: The access to improved sanitation in the RAEOA is 60%. This is higher than the national average of 40%.

The Oecusse SAR has made significant progress since its establishment in 2002. The SAR has achieved economic growth and improved the standard of living.

Despite these positive developments, the RAEOA still faces a number of challenges, including:

1. High levels of unemployment: Unemployment rates in the RAEOA remain high, particularly among youth. This is due in part to a lack of skilled labor and limited opportunities for employment, (undp.org, 2019).
2. Underdeveloped infrastructure: Infrastructure in the RAEOA remains underdeveloped in some areas, particularly in rural areas. This can hinder economic development and make it difficult to attract investment.
3. Limited access to finance: Access to finance is limited in the RAEOA, which can make it difficult for businesses to grow and create jobs, (undp.org, 2019).

The government of Timor-Leste is committed to addressing these challenges and continuing to develop the RAEOA. The government has implemented a number of initiatives to promote job creation, improve infrastructure, and increase access to finance. The government is also working to develop the RAEOA as a tourism destination and to attract investment in other sectors.

Overall, the RAEOA has made significant progress in recent years and is well-positioned for continued economic growth and development. The government's commitment to addressing the challenges faced by the region is encouraging, and the RAEOA has the potential to become a major economic driver for Timor-Leste.

The analysis of the impact of Free Trade Zones on economic growth in Timor Leste, especially RAEOA, reveals that FTZs can have positive effects on economic growth. The impact of Free Trade Zones on economic growth in Timor Leste can be positive, but it is not automatic. The success of FTZs depends on various factors like government policies, infrastructure, and political stability. Additionally, care must be taken to consider potential negative impacts on certain sectors. The Timor Leste government should conduct a comprehensive analysis of the potential positive and negative effects. By designing and

implementing policies that address critical issues and promote sustainable and equitable development, Timor Leste can harness the benefits of FTZs while mitigating potential drawbacks.

CONCLUSION

The study provides a comprehensive analysis of the potential impacts of FTZs on the economic growth of Timor Leste. Free Trade Zones (FTZ) play a significant role in the economic growth of Timor-Leste. The following points highlight the various ways in which FTZs contribute to the country's economic growth: 1) Increased investment: The implementation of FTZs has improved the investment climate in Timor-Leste, attracting both local and foreign investment; 2) Increased export demand: The establishment of FTZs has led to increased demand for Timor-Leste's export commodities, such as oil and natural gas; 3) Regional economic growth: The growth of the economy in Southeast Asian regions has driven demand for Timor-Leste's products, contributing to the country's economic growth; 4) Technology transfer: The increase in foreign investment has encouraged technology transfer to Timor-Leste, which can improve the productivity and competitiveness of the country's industries; 5) Moving up the value chain: Based on the available data, Timor-Leste's economy is showing signs of moving up the value chain, which is a positive development for the country's economy.

In conclusion, while FTZs have the potential to stimulate economic growth in Timor Leste, their effectiveness depends on various factors, including government policies, infrastructure, and political stability. It is crucial for the Timor Leste government to carefully weigh the pros and cons of FTZs and implement policies that support sustainable and equitable development.

The Special Administrative Region of Oecusse-Ambeno (RAEOA) plays a significant role in supporting economic, tourism, educational, and cultural cooperation. In the economic field, Timor-Leste has an important role in supporting bilateral and intra-regional cooperation. The region's proximity to neighboring countries with similar cultural and historical ties encourages people's mobility and fosters extensive networks among stakeholders to support the implementation of Timor-Leste's foreign policy. Additionally, the region's economic dependence and trade relations with Indonesia further underline its significance. However, Timor-Leste faces challenges such as a growing, poorly educated working-age population, insufficient job creation, high poverty levels, and a high total dependency ratio. Despite these challenges, the region's potential for economic development, particularly in the maritime economy, is recognized by organizations like the United Nations Development Programme (UNDP). Therefore, while RAEOA faces various economic and social challenges, it also holds potential for strengthening economic cooperation and contributing to the overall development of Timor-Leste.

The implications for the government of Timor-Leste and the management of the RAEOA may include prioritizing efforts to address economic, social, and diplomatic challenges while capitalizing on opportunities for cooperation, economic development, and effective policy implementation. This may involve strengthening diplomatic relations, addressing health policy challenges, and pursuing sustainable economic cooperation and development initiatives. Additionally, the government of Timor-Leste should carefully weigh the pros and cons of FTZs and implement policies that support sustainable and equitable development. The management of the SAR of Oecusse-Ambeno (RAEOA) should prioritize efforts to strengthen economic cooperation and contribute to the overall development of Timor-Leste.

The implications of this study for businesses and potential investors are significant. The study provides valuable insights into the economic effects of establishing a free trade zone in

Timor-Leste, offering empirical analysis that can inform business decisions and investment strategies. For academics and future research, the study contributes to the understanding of the impact of free trade zones on economic growth, providing a basis for further research and analysis in this area. The findings can also serve as a reference for academic studies and research on the development of free trade zones and their implications for economic growth.

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