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ẢNH HƯỞNG CỦA DỰ ÁN XÂY DỰNG KÊNH ĐÀO KRA ĐẾN VẬN TẢI TOÀN CẦU VÀ Ý NGHĨA ĐỐI VỚI VIỆT NAM

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Tóm tắt

Kênh đào Kra là một dự án quy mô lớn cung cấp tuyến hàng hải mới nối Vịnh Thái Lan với Biển Andaman, nối Ấn Độ Dương và Thái Bình Dương. Đề xuất xây dựng Kênh Kra đã thu hút được sự quan tâm đáng kể từ các nhà hoạch định chính sách, nhà lập pháp, các bên liên quan đến hàng hải cũng như các nhà khai thác vận tải và cảng biển do những lợi ích mà kênh đào mang lại như tiết kiệm chi phí, tăng cường an toàn và an ninh cũng như giảm khoảng cách và thời gian di chuyển so với đường đi qua eo biển Malacca. Sự kiện này rất có thể sẽ ảnh hưởng đến hoạt động vận tải toàn cầu hiện nay. Do đó, mục tiêu của bài viết này là nghiên cứu những tác động có thể có của quyết định xây dựng Kênh Kra đối với những thay đổi trong giao thông vận tải toàn cầu, tập trung vào tuyến đường vận chuyển, cơ sở hạ tầng và tăng trưởng kinh tế. Ngoài ra, cũng đưa ra đề xuất về tác động kinh doanh hàng hải trong tương lai đối với Việt Nam sau khi xem xét việc tái tạo nền kinh tế do tính khả dụng của tuyến đường hàng hải mới này.

Từ khóa: kênh đào Kra, vận tải toàn cầu, ngành vận tải biển

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THE IMPACT OF THE KRA CANAL PROJECT ON GLOBAL TRANSPORTATION AND IMPLICATIONS FOR VIETNAM

Abstract

The Kra Canal is a mega-project that provides a new maritime route that would connect the Gulf of Thailand with the Andaman Sea, linking the Indian and Pacific Oceans. The proposal to construct the Kra Canal has garnered significant interest from policymakers, legislators, maritime stakeholders, as well as shipping and seaport operators due to benefits such as substantial cost savings, increased safety and security, and a reduced travel distance and time compared to the route through the Straits of Malacca. This phenomenon will most likely affect the current transportation activities on a global scale. Therefore, the objective of this paper is to study the possible impacts of the Kra Canal decision on the changes in global transportation by focusing on the shipping route, infrastructure and economic growth. Also, future maritime business implications for Vietnam are proposed after taking into consideration the reshaping of the economies because of the accessibility of this new maritime route.

Keywords: Kra canal, global transportation, shipping industry

1. Introduction

During the late 1970s, global economies, especially the emerging economies in Southeast Asia, were coping with escalating oil prices and stagnant economic growth. It was in the middle of this economic uncertainty that the long-standing concept of constructing a canal in southern Thailand reemerged. The concept of constructing the Kra Canal (also known as the Kra Isthmus Canal) was first introduced and deliberated among maritime stakeholders in the late 17th century. This ambitious project aimed to create a direct connection between the Gulf of Thailand and the Bay of Bengal in the Indian Ocean, situated at the Isthmus of Kra in Thailand. This project will provide various trade and economic benefits to Thailand and the ASEAN region (Sulong, 2012). The construction of the Kra Canal enables ships to bypass the Strait of Singapore and Malacca, mitigating the dangers posed by pirates and congestion. This alternative route helps in avoiding the high traffic conditions in the Straits of Malacca and potentially reducing the occurrence of ship accidents in the region (Jeevan et al., 2016, Jeevan et al., 2018).

The Canal will definitely change the landscape of international transportation, specifically commercial ships on the Indian-Pacific Ocean route. The enhanced accessibility it provides is expected to bring significant benefits to the shipping, transportation, and regional economy. Therefore, this article contributes a comprehensive analysis of the impact of the Kra canal project on global transportation. In this article, the possible implication of this project in the changing Vietnamese maritime industry should be discussed as well as proposing solutions to take its advantages and overcome challenges.

2. Methodology

In this research, we use a descriptive method to provide non-numerical data which is analyzed from several articles, e-books, case studies and interviewing selected experts.

In the literature review, we provide an overview of previous studies on the Kra Canal project, its expected impacts on a global scale and specifically on countries in the region, as well as the benefits that Vietnam can gain from this project.

In order to come up with possible implementations for Vietnam, after collecting data from several sources, we continue to synthesize information to analyze challenges and opportunities based on 3 aspects which are environmental, geopolitical and economic aspects through the PESTLE analysis.

Regarding recommendations for Vietnam, we adopt Economic Integration Theory to emphasize on prioritizing economic integration within the ASEAN region and engaging in integration programs with key markets reflects the principles of economic integration theory. This theory suggests that countries can benefit from closer economic ties through increased trade, investment, and cooperation. Besides, we also apply a Sustainable Development Framework which concentrates on sustainable implementation of the Kra Canal project and implementing environmental protection measures reflects a commitment to sustainable development principles. This framework seeks to balance economic growth with environmental protection and social equity over the long term.

3. Literature Review

3.1. *Previous research*

The history of proposing the Kra Canal or Kra Isthmus Canal has been widely discussed by researchers: Khalid (2006), Kinder (2007), Cathcart (2008), Sulong (2012). One example is the feasibility study carried out by Chow in collaboration with the U.S. consultant, Tippetts-Abbet-McCarthy-Stratten (1977), and Professor Edward Teller also provided advice on the possibility of utilizing nuclear energy for the excavation of the canal.

The potential effects of the Kra Canal project on the global scale have been studied by national and international researchers. Geographically, the Kra Canal will divide mainland Southeast Asia from maritime Southeast Asia. This has the potential to be leveraged in shaping power dynamics among major players like the United States, India, and China. The construction of the Kra Canal holds the promise of fostering economic and political unity among the nations of mainland Southeast Asia. In a way, it could diminish the value of collaboration among members of ASEAN, thus leading to divisions that could jeopardize the region's security. The situation can be further complicated by the existence of sub-economic regions such as the BIMP-EAGA (Brunei, Indonesia, Malaysia, Philippines – East ASEAN Growth Area), which may end up causing a fragmented ASEAN, both economically and geographically (Sulong, 2012).

Furthermore, the maritime business operations in the Malacca Strait could undergo substantial changes, and the economies may be reshaped due to the introduction of the newly accessible sea route (Rahman, 2016). Specifically, it is also mutually believed that the Kra Canal project may generate a positive economic impact to Thailand on a whole. However,

simultaneously, it is anticipated to exacerbate social issues in addition to the existing challenges (Wan, 2016).

For Vietnam, the new canal proves advantageous in all economic aspects. The inherent advantages of the canal's geographical features provide a basis for proposing a plan to reform Vietnam's maritime economy through maritime business activities (Phan, 2022).

3.2. Research gap

While the literature review comprehensively explores the historical background, global implications, and specific economic advantages for Thailand and Vietnam, there are areas that deserve further research in detail. *Firstly*, the assessment on the environmental impacts of the Kra Isthmus on the ecosystem has not been carried out. This should encompass potential damage to biodiversity, disruption of water flow, and long-term ecological consequences. *Secondly*, the Kra Canal might significantly alter FDI landscapes in Vietnam. However, getting a deeper insight on other sectors which could also benefit from the project and in general, creating new industries to harness FDI is crucial. *Thirdly*, impact on the tourism industries in Vietnam is worth further investigation. A comprehensive analysis should consider both potential benefits, such as increased cruise ship traffic, and potential drawbacks, such as diverting tourists away from established destinations. *Finally*, analysis of the potential long-term effects of the Kra Canal on Vietnam is required, particularly with regard to changes in import/export relations and the volume of trade.

4. Overview of Kra Canal Project

4.1. History of Kra Canal

The Thailand Canal, also known as the Kra Canal or Kra Isthmus Canal is one of many plans to construct a canal that would cross the Isthmus of Kra in southern Thailand and connect the Gulf of Thailand with the Andaman Sea. The project planned to significantly reduce the amount of time it took to travel across the heavily trafficked-trade routes.

In fact, the original idea of a canal across the Isthmus of Kra that would shorten transit time across Asia was conceived and proposed as early as 1677 by Thai King Narai the Great. He asked French engineers de Lamar to study the possibility of building a waterway connecting Songkhla with Madrid (Myanmar), but this idea was abandoned because it was impractical with the technology of the time.

It was not until the early 1970s that the canal project was reconsidered. In 1972, a Thai-Chinese industrialist, K.Y. Chow convinced the Thai government to consider this project. He said that although the cost is expensive, the canal will bring profits from port activities, transit fees, and transshipment fees. However, the 1973 oil crisis caused a global economic recession, causing the project to be postponed.

In 2005, the Washington Post revealed that China wanted to contribute capital to build the Kra Canal to create regional importance. According to knowledgeable people, the Kra Canal is

a *"launching pad"* for China to realize the giant *"Silk Road"* project that this power has been conceiving for a long time.

Even during the term of former Prime Minister Thaksin Shinawatra (2001 - 2006), the Kra Canal project was once again named. During the time of Prime Minister Yingluck Shinawatra, this canal continued to be mentioned.

It is known that in May 2015, representatives of China and Thailand signed a Memorandum of Understanding on the construction of Kra Isthmus Canal with a total expected investment capital of nearly 30 billion USD. Although it has been put on hold many times, the Kra Canal still proves its potential to serve the economy and defense in the future after frequently becoming a target for countries to compete for ownership over a long period of time during the past 3 centuries. And studies on its feasibility are still continuing.

However, on the occasion of his visit to the US and participation in the 2023 APEC Summit Week on November 13, Thai Prime Minister Srettha Thavisin mentioned that the Thai government has had a period of time researching the feasibility of building a viaduct Land Bridge instead of continuing chasing the Kra Canal project. With a total investment capital for the Land Bridge project expected to reach 1.400 billion baht (nearly 40 billion USD), the Thai Government said the project will be invested in the form of public-private partnership (PPP). The government will support site clearance, and the development of all investment categories will be carried out by investors. The Investment categories include:

- The first category is to construct 2 deep-water seaports: One is in the East and the other is in the West. The Eastern port is proposed to be built at Riew cape in the Gulf of Thailand (in Chumphon province). Whilst, the Western port is expected to be built at cape Ao-ang cape in the Andaman Sea (in Ranong province).
- The second category of the project is to build a highway and high-speed double railway connecting the above two seaports with a total length of about 90 kilometers which they need to spend about 220 billion baht (6.2 billion USD).
- The third category is to develop a cargo transportation system between the two ports, with an estimated cost of 140 billion baht (4 billion USD).

Finally, according to the wishes of investors from Saudi Arabia and China, an oil and gas pipeline through these two provinces should also be built to transfer oil through Thailand to ASEAN countries.

Nevertheless, the Thai government is still taking into account the feasibility of these four-categories before making a final decision.

4.2. Geographical characteristics of Kra Canal project



Figure 1: Proposed Thai Kra canal routes

Source: Maximilian Dörrbecker (Chumwa) (2010)

Thailand's Kra Canal is a narrow strip of land, extending from the North to the South, connecting the Malaysian peninsula with the Asian mainland.

Overlooking the Gulf of Thailand, the Eastern part of the Kra Canal is a part of Thailand. Whilst, the Western part which faces the Andaman Sea, is a part of Myanmar (Tanintharyi area).

Geographically, the Kra Canal is a low-lying portion of a mountain range that stretches from the Malay Peninsula to the Himalayas. To the North of the Canal, it is the Phuket Mountain, while the Titiwangsa range lies to the south. This isthmus is 44 kilometers wide at its narrowest point, between Sawi Bay and the Kra River mouth, and 75 meters above sea level at its highest point.

According to Ian Storey (2019). The routes proposed to be built on the Kra Canal were:

- The first Kra Isthmus route was proposed to connect Ranong and Chumphon - the narrowest area in Southern Thailand at a distance of roughly 50 km. This rocky mountain range is 1600 kilometers long with a height ranging from 75 meters to 1400 meters above sea level.
- Another proposed route connecting Bandon Bay (near Surat Thani city - Surat Thani province) with Phang Nga province.
- The next proposal was to extend from Satun province's Pak Bara to Songkhla province. It was supposed to be an alternative road from Sikao, Trang province to Songkhla province.
- One of the anticipated proposals was in 2015. The route 9A was expected to pass through Krabi, Trang, Phatthalung, Nakhon Si Thammarat and Songkhla, for a distance of 128 kilometers. It stated that the Kra canal will be about 120 kilometers long, 400 meters wide, and 25 meters deep, appearing to be the project's final form from 2015.

4.3. Scale of Kra Canal



Figure 2: Route for Thailand canal

Source: Indo-Pacific Defense Forum (2019)

This strait is a narrow strip of land running north-south, connecting the Malay peninsula with the Asian mainland, with a total length of about 1000km (600 miles), the road is narrow (the narrowest part is less than 2.5km).

The Kra Canal has a length of 102km, located at a depth of 33m, allowing ships of 500.000 tons to travel back and forth in two lanes at a speed of 7knot (international standard cruise speed).

According to Suwah Pearly (2020), a Thai non-governmental organization estimates that the country will earn about 120 billion baht/year (about 3.6 billion USD) from this canal. Some other analyzes say that the Thai Canal could very well help Thailand become a new regional trade and financial center even if only a quarter of the ships passing through the Malacca Strait move to the Kra Canal.

It is expected that the China-Thailand Kra Infrastructure Investment and Development Company will be the investor of the Kra Isthmus Canal project. When completed, Thai Canal will be a vital sea route connecting Asia, the Middle East and Europe, becoming the largest Asian canal ever.

Regarding the roadmap, the Thai government plans to divide the project into 4 phases from 2025 to 2040, of which the first phase will be the most important phase, implemented from 2025 to 2030. The next phases will be implemented from 2030-2040, completing the entire project and reaching a maximum capacity of 40 million TEU in 2039.

5. Impact of the Kra Canal Project on global transportation

5.1. On Shipping route & Transit times

5.1.1. Reshape global shipping route

As planned, the 100-kilometer Kra Canal would cross the Isthmus of Kra in southern Thailand and connect the Gulf of Thailand with the Andaman Sea. This would help facilitate trade between the Pacific Ocean and Indian Ocean.

According to Seatrade Maritime News (2022), the proposed canal would take between five to ten years to construct and is wide enough to fit two ships. It will make it possible for ships to navigate between China, Europe, the Middle East, and India without having to go via the congested and narrow Straits of Malacca and Singapore. If the project is carried out, it seeks to bypass the congested Malacca Strait.

5.1.2. Reduction in transit time for shipping vessels

Seatrade Maritime News (2022) estimated that, when completed, the canal will be able to cut trip times from 2 to 5 days of transit and shorten travel distances across Southeast Asia by 1,200 nautical miles. This includes a 1,200 kilometers reduction in transit from the Pacific Ocean's Gulf of Thailand to the Indian Ocean's Andaman Sea. It is also anticipated to reduce the shipping cost by 15%. Prosperity and economic expansion will result from this for the entire region. Moreover, the scale of the Kra Canal allows all types of large transport ships to pass through, including super large crude oil tankers.

5.1.3. Comparison with existing marine routes

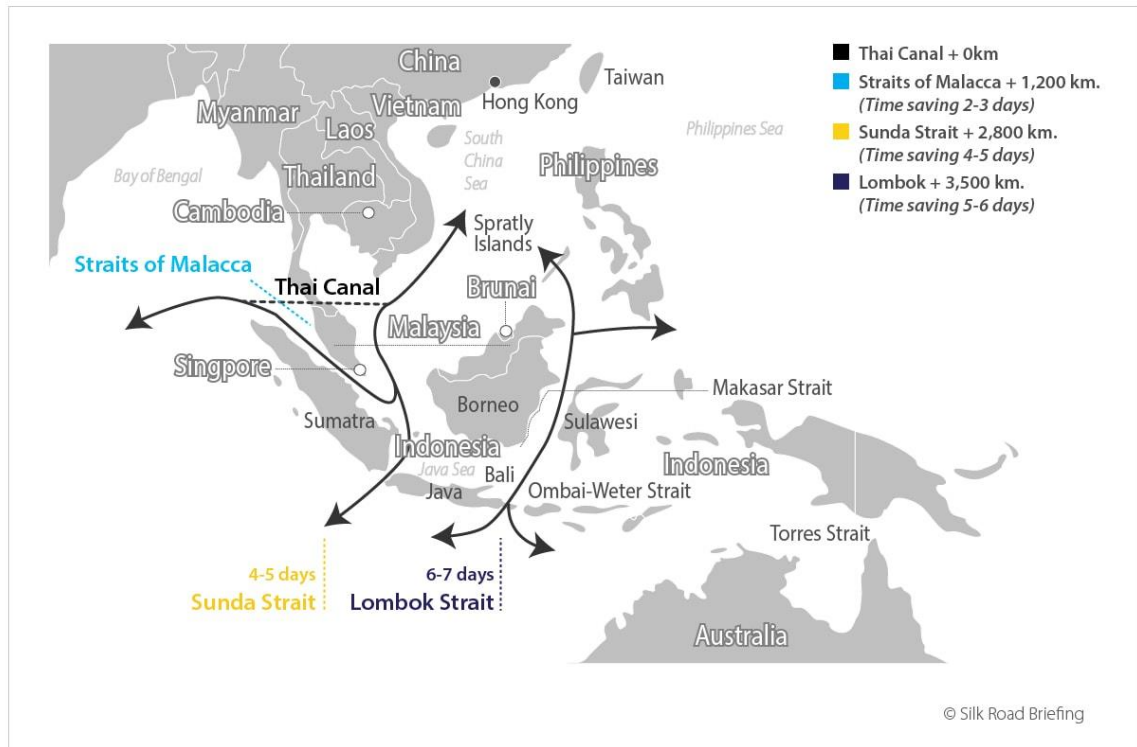


Figure 3: Comparison with Straits of Malacca Route

Source: Dezan Shira & Associates (2017)

Based on Yuan et al. (2020), the Kra Canal is estimated to reduce the distance for shipping vessels when bypassing the Strait of Malacca by 722.2 nautical miles (1,300 kilometers). Supposing the sailing speed of containership is 20 knots the canal could reduce the sailing time by 36.1 ($=722.2/20$) hours which is approximately 1.5 days ($=36.1/24$)

Meanwhile, according to Shira. D et al. (2017), the Kra Canal would also reduce the distance for shipping vessels when bypassing the existing Sunda Strait which links the Java Sea (Pacific Ocean) and Indian Ocean by 2.800 kilometers. That means the routes from the Kra Canal would save 5 to 6 days in comparison with those from the Strait of Sunda. In addition, when compared with the routes for shipping vessels from Lombok which is a Strait of Bali connecting to the Indian Ocean, the shipping routes from Kra Canal would save 3,500 kilometers and 5 to 6 days of sailing time.

5.2. On Port & Shipping Infrastructure

The development of the Kra Canal is expected to bring about significant development or port and transportation infrastructure at the stakeholders. A good transportation infrastructure fosters effective connectivity among trading nations. So, this can be seen as a factor in the foundation of economic growth.

The proposed construction of the Kra Canal will help reduce the circulation pressure in the Malacca Strait. The Malacca Strait is one of the busiest shipping channels globally, but it is precisely for this reason that it is facing the complex problems of pollution and piracy. The Kra

Canal not only has the potential to reduce the pressure on these challenges, but also helps to the port development in countries like Thailand, the northern peninsula of Malaysia, and China, etc. The emergence of the canal will facilitate the growth of warehouses, logistics distribution centers, oil refineries, and petroleum storage (Sulong, 2012; Lane, 2015).

As far as ports are concerned, the Kra Canal will be of great benefit to Thailand, especially the Songkhla port - which is located in the projected canal area. This development is expected to lead to enhanced infrastructure and real estate growth (Sulong, 2012). Not only Thailand, Malaysia is also planning to develop more ports through this project. Currently, according to the ASEAN Ports Association, Klang Port is the largest port in Malaysia. However, if the Kra Canal project is implemented, the Penang port is predicted to experience growth, becoming a new maritime transport hub in the country (Rahman, Salleh, Najib & Lun, 2016). This development is anticipated to further stimulate other ports in the region, such as Kuantan Port and Tok Bali Port - is expected to become primary suppliers for vessels passing through the area (Mohamed, 2019). Additionally, the trade that is being redirected from Singapore will also benefit the ports in Hong Kong and China.

5.3. On Trade Volume & Economic Growth

The Kra Canal has enormous potential for global business and trade, providing substantial support for the economic development of the region. Particularly, in a period of international trade is recovering and growing strongly, which shows that the increasing number of transiting vessels in the Malacca Strait has a tendency to rise again (around 10% in October 2023 compared to the same period of the previous year - as reported by inforMARE), after three years affected by the COVID19 epidemic.

The first economic benefit that can be mentioned is that there will be a large number of jobs created resulting from infrastructure projects at the ports (Lane, 2012), and as the result, reducing unemployment rates not only in Thailand but also in neighboring countries. As international trade operations flourish, business and service sectors in the surrounding areas also experience growth, leading to the development of the Southern Economic Corridor (SEC). The SEC is expected to grow along the eastern coast of Thailand through commercial, industrial, and tourism activities (Sisovanna, 2012). Consequently, Southeast Asia could become an attractive destination for foreign direct investment (FDI).

Not only bring economic benefits to countries in the region, but the development of the Kra Canal also led to the cost reductions for navigation. Through the Kra Canal, fuel consumption can decrease up to 41.5%, estimated to save approximately USD 350.000 per voyage (Zuhdi and Turan, 2021).

According to Chen and Kumagai (2016), if both the Kra Canal and the Malacca Strait operate concurrently, it will have a positive economic impact on many countries, especially China - which is expected to benefit most with an estimated economic impact of USD 21.5 billion, followed by India and Japan at USD 17.7 billion and USD 10.6 billion, respectively. In terms of GDP growth, surprisingly, Thailand ranks second with 0.18%, while Bhutan is projected to have the highest increase at 0.26%. Beyond East Asia, the EU is also anticipated to benefit economically, with an estimated gain of USD 23.4 billion.

Chen and Kumagai (2016) also stated that there are negative impacts on some economies worldwide, such as the United States, Singapore, Malaysia, and Brunei. However, these figures are relatively small, with a GDP decline of only about 0.01% for the United States and Malaysia. For Singapore and Brunei, this figure is 0.04%.

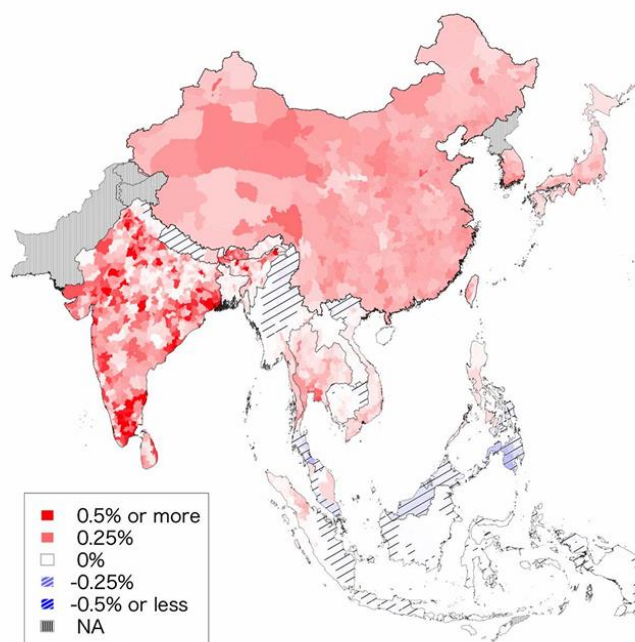


Figure 4: Economic Impacts of the Kra Canal, 2030

Source: Calculated by INSTITUTE OF DEVELOPING ECONOMIES

In conclusion, the Kra Canal brings many economic benefits to both regional and global nations, while the Malacca Strait continues to provide advantages for countries that are negatively affected by this project. Thus, the cooperation and mutual enhancement of the Kra Canal and the Straits of Malacca is beneficial to the economy of all ASEAN nations.

6. Impact of Kra Canal Project on Viet Nam

6.1. *Resource exploration and exploitation*

The East Sea is considered one of the five largest oil and gas basins in the world. According to the World Bank, it is estimated that there are 900,000 billion cubic feet of natural gas and oil reserves in the East Sea, equivalent to 7 billion barrels with a production capacity of 2.5 million barrels/day. In the sea and continental shelf of Vietnam, many sedimentary basins with oil and gas prospects have been identified. In the sea area of more than 1 million square kilometers, up to 500,000 square kilometers are in the prospective oil and gas area. Oil and gas reserves off the coast of Southern Vietnam may account for 25% of oil reserves at the bottom of the East Sea; allowing exploitation of 30 - 40,000 barrels/day (159 liters each), about 20 million tons/year. If appropriately utilized, this abundant resource will have a significant positive economic impact on both Vietnam and the global community.

The creation of the Kra canal has made it easier to access new sea routes, which may be beneficial in resource exploration and exploitation, especially in maritime areas. We can expand the fishing grounds, look into more oil and gas areas, and use maritime routes for trade and transportation of marine resources, especially for the Southern coast and Phu Quoc Island.

6.2. FDI attraction

According to Ministry of Planning and Investment, in recent years, Vietnam has been very successful in attracting foreign investment capital, especially in the second half of 2023, contributing to the disbursed FDI capital flow in Vietnam reaching 23.2 billion USD, an increase of 3.2 billion USD. 5% compared to the previous year and was the year with the highest disbursed FDI capital scale ever. Foreign investors have invested in 18 industries out of 21 national economic sectors. Of which, the processing and manufacturing industry leads with a total investment capital of more than 23.5 billion USD, the real estate business ranks second with a total investment capital of nearly 4.67 billion USD.

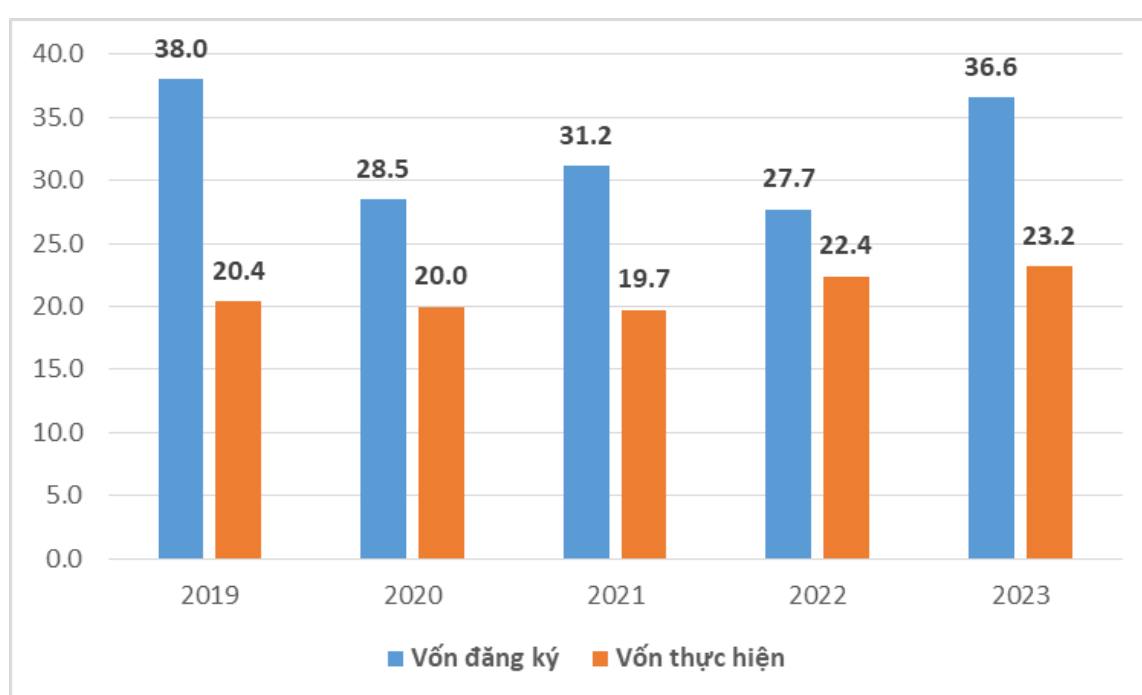


Figure 5. Foreign investment capital from 2019 to 2023

Source: General Statistics Offices

However, Vietnam's logistics sector hasn't drawn many foreign direct investment (FDI) investors. According to the Vietnam Logistics Service Business Association (VLA), this may be due to current difficulties in costs and development planning, such as logistics center planning that has not been implemented aggressively or Vietnam's infrastructure quality is still behind that of other countries in the region. This could affect the ability to attract foreign direct investment as well as long-term potential growth. According to a survey by the World Economic Forum, although infrastructure quality is considered to have improved through increased investment, Vietnam is still behind other countries in the region (ranked 77th over 141 economies over the world). On the positive side, as mentioned above, the construction of

the Kra Canal will incentivize infrastructure development of Vietnam's southern seaports, along with increasing global trade, Vietnam will gradually become the new logistics hub of the region.

The implication of the Kra Canal project also makes it advantageous to apply stimulus programs for both foreign and domestic economic development initiatives, encouraging collaboration and drawing in foreign direct investment. As a result of the state's development cooperation policies, Phu Quoc went from having "no investment projects" to having 321 projects by 2023, with a total registered investment capital of more than 16 billion USD. This demonstrates Vietnam's enormous potential to emerge as a hub for global trade, or as some analysts have put it, "Vietnam could become the second Singapore of Southeast Asia".

Besides, the Kra Canal project will create a strong link between Vietnam and countries in Southeast Asia, India, and the Middle East. This will open up opportunities to enhance economic partnerships with these countries, attract foreign investment, and develop joint projects.

6.3. Tourism

When the Kra Canal is completed, the International Maritime Route will run along and closely connect the coastal cities of Vietnam from Phu Quoc to Van Phong Bay. The Gulf of Thailand, within Vietnam's territorial waters, will become bustling, and Phu Quoc, with its strategic location and good infrastructure, will be able to compete with other ports in the region.

With geographical advantages as a result of Kra Canal, deep-water seaports in the southern region of Vietnam in general, and Phu Quoc in particular, will directly compete with seaports in Singapore because maritime routes will shift towards the Vietnamese coastline as ships from the Pacific Ocean enter the East Sea and the Gulf of Thailand before passing through the Kra Canal, rather than navigating close to the coasts of Malaysia, Indonesia, and the Philippines before entering the Malacca Strait.

Currently, Phu Quoc is constructing and implementing the "Phu Quoc International Passenger Port" with an area of 179.3 hectares and an investment capital of 1,644 billion VND. This is the first multi-functional international passenger port in Vietnam that meets international standards, capable of accommodating large-capacity tourist and cargo ships, driving the development of Phu Quoc Island.

According to Vietnam Plus, in 2023, tourist arrivals to Phu Quoc rose by 14.5% from 2022, reaching 90.7% of the annual target, constituting 67.4% of total arrivals in the province year-to-date. International tourists numbered 521,332, a 211.3% increase from the same period, surpassing the annual target by 49%. Total revenue hit approximately 13,928 billion VND, up 92.5% from the previous period, exceeding the annual target by 21.1%. In 2024, tourism promotion will focus on domestic and international markets, expanding partnerships nationwide and developing various travel routes.

The canal's potential as a bustling maritime route offers Vietnam's tourism sector ample opportunities to thrive. Picture opulent cruise ships, bustling with excited passengers, sailing through azure waters, granting access to Thailand's renowned attractions. Vietnam can leverage this increased maritime activity by introducing themed cruises showcasing its rich cultural

heritage and natural marvels, establishing itself as a top-notch destination for travelers seeking distinctive experiences. These themed cruises might feature visits to ancient temples, immersive cultural activities like cooking classes and performances, and eco-tourism adventures such as exploring pristine islands and marine reserves. Through targeted marketing, Vietnam can position itself as a must-visit spot for travelers craving a memorable blend of luxury, culture, and scenic beauty along its dynamic coastline.

Benefiting from its strategic position and robust infrastructure, Phu Quoc stands poised to rival neighboring ports, fostering tourism growth and drawing a considerable influx of visitors to the island. Optimism runs high among Vietnamese about Phu Quoc, dubbed the "Pearl Island," evolving into Asia's equivalent of Singapore upon the Kra Canal's inauguration.

6.4. Increased import export volume

The construction of the Kra Canal will create a new and more convenient sea route, reducing time and transportation costs for Vietnam. This will help Vietnamese export products become more competitive in the international market, especially agricultural products from coastal regions such as Can Tho, Dong Thap, Bac Lieu, etc. For example, crops like rice, coffee, cashews, and various fresh fruits can be quickly and safely transported to consuming markets in West Asia, Europe, and North America through the Kra Canal. Specifically, the Dong Thap Muoi area, located in the coastal region of the Southwest, has the potential to develop rice cultivation and shrimp farming by utilizing the alluvial soil and freshwater from the Mekong River.

On the other hand, Vietnam also benefits from importing goods through the Kra Canal, particularly mineral resources. The Kra Canal will create a transportation route that directly connects Russia to China through the territory of Kazakhstan. Having a new and stable oil supply source can help Vietnam cope with fluctuations in oil supply and prices in the international market. This can reduce the risk of oil supply disruptions, ensuring stability and reliability for oil-related industrial activities such as energy production, chemical manufacturing, and cargo transportation. Additionally, India is one of Vietnam's major coal providers. The construction of the Kra Canal can facilitate the development of the Vietnam-India trade route, making coal imports easier. Furthermore, Vietnam also benefits from importing minerals such as petroleum and LNG (liquefied natural gas) from as far as the Middle East and Europe.

7. Challenges, opportunities & recommendations for Vietnam

7.1. Challenges

7.1.1. Environmental aspects

The construction of this canal will bring about harmful environmental consequences in the immediate time frame, spanning from its inception to completion. Examples include air blasts, dust clouds, ground shock, and air pollution stemming from construction explosions. Additionally, the utilization of materials and machinery will inevitably lead to increased greenhouse gas emissions. This is due to the production and transportation of materials,

extraction of necessary resources, and potential environmental damage during construction. Also, the construction of the Kra Canal in southern Thailand has far-reaching implications for the region's fragile ecosystems. These ecological consequences would not be limited to Thailand; Vietnam, with its extensive coastline and reliance on marine resources, would also bear the brunt of the consequences. The canal's environmental impact would reverberate throughout the country's fisheries, tourism industries, and coastal communities. Given the potential environmental harm, conducting rigorous impact assessments and implementing stringent environmental safeguards is critical to mitigating the canal's ecological damage.

7.1.2. Geopolitical aspect

The political risks associated with terrorism and the proliferation of separatist violence possess the potential to escalate into a regional challenge, posing threats to the security and stability of all nations within the vicinity. The Southeast Asian region, characterized by its diversity across various dimensions such as ethnicity, religion, culture, economy, and political ideologies, has a historical backdrop marked by both internal strife and interstate conflicts. While Southeast Asian nations are interconnected through ASEAN, their interactions are primarily steered by a voluntary spirit of cooperation and a commitment to upholding national sovereignty rather than rigid legal frameworks. Consequently, the bedrock of relationships within ASEAN nations lies in trust and shared aspirations towards common objectives. Nevertheless, tensions may emerge, particularly in instances of conflicting interests, notably concerning unresolved territorial disputes or ethnic and religious schisms, which can strain inter-country relations.

If the Kra Canal were to emerge as a primary transportation route, it has the potential to reshape the economic dynamics in the region, thereby allowing countries like China to bolster their presence in the area. This, in turn, could impact the standing of Southeast Asian nations, including Vietnam. According to some experts, the construction of the Kra Canal could amplify China's capacity to interfere in the territories of countries within the region, consequently affecting the political and military equilibrium. In the event that China gains control of the canal, it could strengthen its trade and military influence in Southeast Asian countries, potentially straining the amicable relations between Vietnam and its traditional partners, such as Japan and the United States. If the canal materializes, Vietnam would need to ensure the security and defense of its territory while engaging in economic, military, and political collaborations with other partners to navigate the evolving regional landscape. Moreover, if the Kra Canal were to be exploited exclusively by a single country or a group of countries with control rights, it could foster divisions in the region, particularly if those countries have strategic relationships with nations like China or the United States. In terms of security, the Kra Canal could potentially serve as a conduit for threats such as terrorism or illicit activities, particularly as it becomes a critical route for transporting goods and energy in the region. Consequently, it would necessitate adjustments in foreign policy and border security measures to adapt to the new circumstances. In conclusion, the construction of the Kra Canal bears significant political implications for Vietnam, prompting the need to formulate an appropriate strategy to capitalize on potential opportunities while effectively addressing the challenges that the canal may pose.

7.1.3. Economic aspect

While the Kra Canal promises shorter shipping distances and potentially lower transportation costs, it also creates uncertainty for Vietnam's maritime industry. Existing Vietnamese ports might experience a decrease in traffic as shipping lines opt for the faster route provided by the canal. This decline may have a negative impact on port revenues and reluctant overall economic growth. Additionally, the canal project's substantial expenses and uncertain profitability raise concerns about Vietnam's potential financial involvement. To avoid becoming economically dependent on the Kra Canal, Vietnam should prioritize improving its port infrastructure, diversifying its trade partnerships, and investing in alternative connectivity projects, such as the proposed Song Dinh canal within the country's borders.

Concerning Vietnam, the projected influx of maritime traffic navigating through the Kra Canal would traverse along the country's southern coastline, thereby presenting a compelling impetus for Vietnam to expand its southern port facilities, potentially positioning them in competition with Singapore. Vietnam's economic landscape, owing to its distinctive geographic positioning, exhibits a pronounced dependency on its port infrastructure, with sea-based transportation servicing approximately 90% of all goods (Jensen, 2009). According to figures released by the Vietnamese Seaports Association spanning 2005 to 2008, the southern region of Vietnam boasts 23 significant ports, collectively managing in excess of 78 million metric tons of cargo annually (Jensen, 2009).

7.2. Opportunities

7.2.1. Environmental aspects

In the medium to long term, and by this we mean from the inception of the canal after its construction to the future, the canal is generally considered to potentially have significant positive decarbonizing and greening benefits. It will reduce sailing distances by approximately two to three days through ships bypassing the Strait of Malacca (Lam, 2018).

7.2.2. Geopolitical aspect

The construction of the Kra Canal introduces a series of potential political opportunities for Vietnam worthy of scholarly inquiry.

Firstly, Vietnam stands poised to leverage its geographical proximity to the canal as a strategic asset for engaging in diplomatic initiatives with Thailand and other pertinent stakeholders. Such engagements hold the promise of fostering regional cooperation and fortifying diplomatic relations, thereby contributing to the broader discourse on regional diplomacy within Southeast Asia.

Secondly, the canal's emergence affords Vietnam the prospect of asserting itself as a consequential actor in regional affairs, particularly within the context of discussions pertaining to the canal's operational dynamics and security imperatives. This potential avenue for heightened influence underscores Vietnam's evolving role as a key player in the ASEAN landscape and merits scholarly exploration within the realm of regional politics.

Thirdly, the anticipated economic ramifications of the canal's construction present Vietnam with opportunities to bolster its economic standing through heightened trade and investment

activities. This entails the cultivation of stronger economic partnerships with canal-utilizing nations and the attraction of increased foreign investment, thus necessitating scholarly inquiry into Vietnam's economic diplomacy strategies and their implications for regional economic integration. Moreover, Vietnam's response to the canal's construction may entail considerations of domestic infrastructure development, particularly within the realm of port facilities and transportation networks. This aspect warrants scholarly attention to discern the intricate interplay between infrastructure investment, economic growth, and regional connectivity within the Vietnamese context.

Lastly, the canal's security dimensions impel Vietnam to collaborate with relevant stakeholders to safeguard maritime routes and mitigate security threats. Such collaborative endeavors necessitate scholarly examination to elucidate the complexities of regional security cooperation and their implications for Vietnam's broader security posture. In sum, the exploration of the political opportunities arising from the Kra Canal's construction offers valuable insights into Vietnam's evolving role in regional affairs, its diplomatic engagements, economic strategies, infrastructure development endeavors, and security considerations within the broader Southeast Asian context.

7.2.3. Economic aspect

The prospective development of the Kra Canal holds promise for enhancing maritime traffic and catalyzing regional commerce and trade. Furthermore, an anticipated ancillary benefit of the canal's expansion is the potential dissemination of trade advantages to neighboring countries, notably Myanmar, Cambodia, and Vietnam. The burgeoning international trade activity stimulated by maritime transport, along with ancillary enterprises and services situated proximate to the canal, is poised to contribute to the augmentation of the Southern Economic Corridor (SEC).

The strategic proximity of Vietnamese ports to the canal could attract heightened foreign investment, consolidating Vietnam's standing as a pivotal regional logistics center. Moreover, the canal's development may serve as a catalyst for Vietnam to further modernize its port infrastructure and advance its maritime technology, positioning the nation prominently within the global maritime sphere. Additionally, the Kra Canal could offer a strategic conduit for Vietnamese exports, mitigating transportation expenses and enhancing operational efficiency. Consequently, this could foster growth in Vietnam's export-driven sectors and bolster its competitiveness on the international stage.

The canal's potential to become a bustling maritime artery provides opportunities for Vietnam's tourism industry to prosper. Consider luxurious cruise ships, their decks teeming with eager passengers, gliding through turquoise waters, providing breathtaking coastal views and access to Thailand's famed tourist attractions. Vietnam can capitalize on increased maritime traffic by developing themed cruises that highlight the country's rich cultural heritage and natural wonders, establishing itself as a premier destination for discerning visitors seeking unique experiences. These themed cruises may include visits to ancient temples and historical sites, immersive cultural activities such as traditional cooking classes and performances, and eco-tourism opportunities such as exploring pristine islands and marine reserves. Through

strategic marketing efforts, Vietnam can position itself as a must-visit destination for travelers looking for an unforgettable blend of luxury, culture, and natural beauty along its vibrant coastline.

7.3. Recommendations

Initially, it is crucial to prioritize economic integration within the ASEAN region through international negotiations and the formulation of a national supply chain strategy. This will help secure Vietnam's strategic position in the region. Of particular importance is the construction of the Kra Canal, which is expected to bring about significant changes in the ASEAN maritime industry and international transportation routes, especially for commercial vessels navigating the Indo-Pacific route. Vietnam stands to gain substantial benefits across various economic sectors from this new canal.

Secondly, it is imperative for Vietnam to actively engage in integration programs with key markets in the region, including the Regional Comprehensive Economic Partnership (RCEP), ASEAN-India, the Indo-Pacific Economic Forum (IPEF), and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). By doing so, Vietnam can remain informed about market trends, technological advancements, and changes in the supply chain for goods and services. This proactive involvement will enable Vietnam to adapt and capitalize on emerging opportunities in these markets.

Thirdly, the strategic position of the East Sea (also known as the South China Sea) must be emphasized in Vietnam's overall development strategy for technical infrastructure, particularly in the transportation sector. This includes improving seaport connectivity and establishing complementary support systems for air, road, rail, and inland waterway transportation. The aim is to maximize the optimal use of international gateway ports such as Hai Phong in Lach Huyen, Cai Mep-Thi Vai in Khanh Hoa, Quy Nhon in Binh Dinh, Cai Lan in Quang Ninh, Saigon, Cua Lo in Nghe An, and Dung Quat in Quang Ngai province. Vietnam can optimize the use of these key ports and further enhance its transportation capabilities in the East Sea region.

Additionally, Vietnam must implement supportive policies that foster the growth of the logistics sector. The government can provide investments and incentive programs to encourage the development of the logistics profession. Additionally, regulations and mechanisms should be established to enhance cooperation with other countries in the region and create a favorable business environment.

Vietnam has already taken some steps to support logistics businesses, such as establishing industrial zones and seaports to improve the transportation of goods. However, to fully leverage the potential of the Kra Canal, more comprehensive policies are necessary. Businesses must also strive to enhance their competitiveness by improving production processes, investing in research and development, and adopting innovative technologies.

Vietnam must prioritize the sustainable implementation of the Kra Canal project to safeguard the environment and protect the livelihoods of local communities. Strengthening monitoring and control measures for water quality and climate, along with implementing robust environmental pollution prevention measures, will be essential in preserving the integrity of the ecosystem and respecting the rights of local communities.

8. Conclusion

In this article, the possible impacts of the Kra Canal decision on the changes in global transportation by focusing on the shipping route, infrastructure and economic growth were considered by qualitative analysis. The new Canal is bringing both challenges and opportunities for Vietnam in all regards, considering environmental and economic factors. For instance, enhanced economic integration within the ASEAN region could be achieved through international negotiations and the creation of a national supply chain strategy. Vietnam should also highlight the strategic significance of the East Sea by incorporating it into an overarching development strategy for technical infrastructure, especially in the transportation sector. Moreover, Vietnam needs to enact policies that encourage the expansion of the logistics industry. Meanwhile, businesses and enterprises should exert efforts to boost their competitiveness by refining production processes, investing in research and development, and adopting innovative technologies. In terms of environmental concerns, Vietnam must prioritize the sustainable execution of the Kra Canal project to safeguard the environment and protect the well-being of local communities.

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