



JOURNAL OF MARITIME LOGISTICS
Universiti Malaysia Terengganu



Journal of Maritime Logistics is an international multidisciplinary journal. It collects and publishes scholarly articles on topics related to the maritime industry. It provides the results of the latest research and analysis on foreland, seaports and the hinterland. It also explores substantial topics, including logistics, policies, operations, management and navigation related to three main agenda — ocean activities, seaports and the hinterland.

eISSN: 2805-5195 Journal homepage: <https://journal.umt.edu.my/index.php/jml/index>

BELT AND ROAD INITIATIVE INTENDED TO BOOST THE MARITIME TOURISM SECTOR

Mahendrran Selvaduray^{1*}, Chowdhury Pretom² & Norhaslinda binti Yunus³

To cite this article: Mahendrran Selvaduray^{1*} Chowdhury Pretom² & Norhaslinda binti Yunus³

¹Malaysian Logistics & Transport Centre, Faculty of Maritime Studies, Universiti Malaysia Terengganu. ²Department of Marine Bioresource Science, Faculty of Fisheries, Chittagong Veterinary and Animal Sciences University, Bangladesh. ³Faculty of Maritime Studies, Universiti Malaysia Terengganu, Kuala Nerus, Terengganu, Malaysia

DOI: <http://doi.org/10.46754/jml.2022.08.005>

To link to this article:



Published online: August 2022



Submit your article to this journal

Full Terms & Conditions of access and use can be found at
<https://journal.umt.edu.my/index.php/jml/index>

BELT AND ROAD INITIATIVE INTENDED TO BOOST THE MARITIME TOURISM SECTOR

Mahendrran Selvaduray^{1*}, Chowdhury Pretom² and Norhaslinda binti Yunus³

¹Malaysian Logistics & Transport Centre, Faculty of Maritime Studies, Universiti Malaysia Terengganu. ²Department of Marine Bioresource Science, Faculty of Fisheries, Chittagong Veterinary and Animal Sciences University, Bangladesh. ³Faculty of Maritime Studies, Universiti Malaysia Terengganu, Kuala Nerus, Terengganu, Malaysia

ABSTRACT

The initiative of One Belt One Road (OBOR) has economically benefited many countries in terms of export and import cargo. Malaysia is one of the countries that greatly export and import commodities business across international borders via different modes. However, this study shows that the OBOR initiative's adaptation in Malaysia seaports is still beginning. The purpose of this study is to identify the issues faced by Malaysian seaports, to adapt the OBOR initiative, as well as to develop a new approach to overcome the obstacles that have been identified. A qualitative research approach was carried out to archive the objective of this study. A total of six maritime experts were interviewed and the results were analyzed by content analysis and coded using Nvivo 12 software. The results show that Malaysia suffers from financial instability, a lack of port capacity, and poor employee readiness. To overcome the issues, the experts proposed upgrading the port capacity, improving the port system with modern technology, and expanding the employee's knowledge, as well as the safety and security of the port. This study proposes a novel framework to adapt maritime tourism as a new business market into OBOR strategy. This framework will overcome the current issues that Malaysian seaports have encountered. In the current digital world, the introduction of many advanced technologies known as "Smart" has great potential to progress the maritime tourism agenda into a smart maritime tourism industry to gain more benefits.

Keywords: One Belt One Road, Maritime Tourism, Smart Maritime Tourism

Introduction

President Xi Jinping of China proposed the One Belt One Road (OBOR) initiative as a new route for maritime activity worldwide, and it has gained widespread support from many nations (Wang *et al.*, 2021). OBOR is a new trade route that connects the Silk Road Economic Belt (SREB) with the 21st-century Maritime Silk Road (MSR). It is divided into two parts: the land-based for SREB and the ocean-going for MSR. OBOR initiative aims to maintain closer economic ties by promoting free international trade and to improve regional transportation networks by introducing the 26 Chinese node-cities. Moreover, this OBOR trade route is a logistical network consisting of a series of paths and stoppages that are used for transporting commercial cargo via many modes of transportation. The OBOR includes a network of railways, highways, ports, pipelines, and communication infrastructure (Koboević *et al.*, 2018; Agatić *et al.*, 2019). In addition, the route is important for import and export activities because linking Chinese ports with those in Southeast Asia, Asia, Africa, the Middle East and Europe.

*Corresponding author: mahendrran10@gmail.com

Most of the maritime players were trying out to gain the most benefits from the OBOR because it has the potential to contribute to the expansion of our economy and way of life. It is necessary to use a maritime route when transporting goods between two or more countries (Jeevan *et al.*, 2021). Hence, the OBOR has the potential to enable further development of

the global and Malaysian seaports. This is because Malaysia is currently the largest trading partner with China among the ASEAN-10 members. Malaysia-China trade totalled US\$59 billion in 2009, accounting for approximately 18.9% of the former's global trade, surpassing the Malaysia-US trade share (10.9%) (Dar and Seng, 2021). Figure 1 below shows the route map of OBOR.

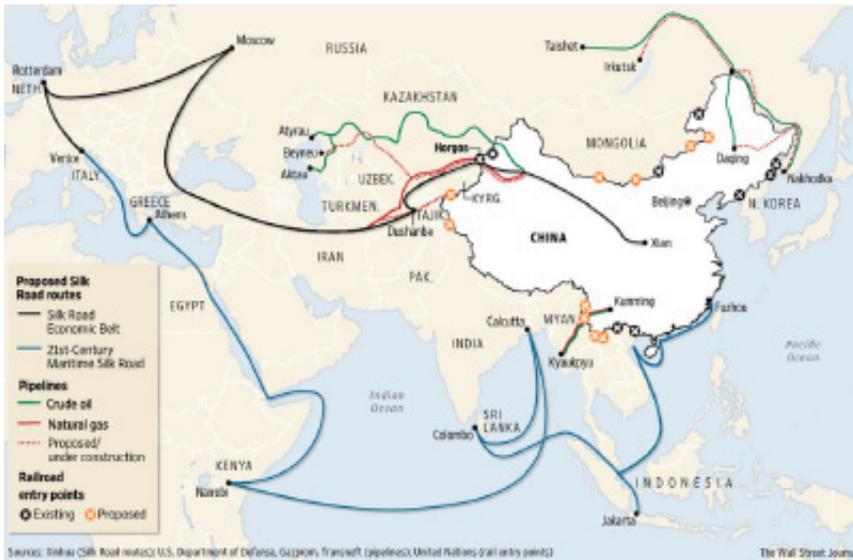


Figure 1: The silk road route and maritime silk route

(Source: Yi *et al.*, 2018)

In order to connect Asia, Southeast Asia and North Africa, China has constructed the OBOR, which passes through numerous interconnecting waterways, such as the South China Sea, the South-Central Pacific Ocean, and the Indian Ocean as a whole. The initiative's coverage region, which includes approximately 60 countries, primarily comprises countries in Asia and Europe (Zhang *et al.*, 2022). Malaysia is strategically located in the Southeast Asia region. Malaysian believe that this OBOR and the MSR will create new

opportunities for Malaysian seaports to partner and collaborate with the countries along the route, and to increase integration, connectivity and economic development along both routes simultaneously. However, the studies of OBOR in Malaysian seaports context are limited. Firstly, this study aims to identify the issues Malaysian seaports face in adapting to the OBOR initiative. Secondly, this study aims to develop a new framework to overcome the obstacles that have been identified.

One Belt One Road

President Xi Jinping unveiled the blueprint of “the Silk Road Economic Belt” during his state visit to Kazakhstan on September 7, 2013. In the speech, he stressed that “*we can use an innovative mode of international cooperation to co-construct the Silk Road Economic Belt in exchange for closer economic ties, deeper regional cooperation and broader space for co-development among countries*” (Zhang *et al.*, 2022). In addition, the President informed the Indonesian parliament that China wished to strengthen the maritime partnership with ASEAN nations, share the benefits of China-ASEAN maritime cooperation and jointly construct “the 21st Century Maritime Silk Road” (Wang *et al.*, 2021; Zhang *et al.*, 2022). The historic term “One Belt, One Road” was soon embedded with President Xi’s latest connotations. “One Belt” refers to “the Silk Road Economic Belt” while “One Road” signifies “the 21st Century Maritime Silk Road”. This was eventually dubbed the OBOR or the Belt Road Initiative (BRI) (Zhang *et al.*, 2022). China serves as a hub for the OBOR initiative and contains the longest economic corridors in the world, spanning Asia, Europe, and Africa. Specifically, the “Silk Road Economic Belt” (also called “the Land-based Belt”) links China’s west hinterland with Europe through Central and Western Asia. On the other hand, the “Maritime Silk Road” (also named “the Sea-based Road”) mainly connects China’s coastal cities with Southeast Asian countries, Africa and Europe through the South China Sea and the Indian Ocean (Agatić *et al.*, 2019; Wang *et al.*, 2021).

Port Efficiency

The application of the life cycle theory to seaports can be used by logistics administrators as planning and evaluation tools (Harrison *et al.*, 2002), as the predictable patterns produced by this theory can provide better insight for monitoring

the industry’s environment (Sletmo, 1999). The main goals of applying a life cycle approach to the seaport sector, as highlighted by Cullinane and Wilmsmeier (2011) and Monios and Bergqvist (2017), are to resolve operational issues that prevent future growth, as well as to identify the signs and competitive strategies associated with each stage of its life cycle (Jeevan *et al.*, 2021). Port efficiency is the rate at which containers are loaded and unloaded per hour, the handling capacity and the average number of containers per ship (Sánchez, 2003). Increasing the terminal’s efficiency can help increase that port system’s overall efficiency. Container turnover, the terminal turnaround for loading and unloading containers, and ship time without congestion at the port are all factors that influence port efficiency (Sánchez, 2003). Several variables influence terminal efficiency, including container mix, work habits, crane efficiency, vessel size, and cargo exchanges (Tongzon, 1994).

Maritime Tourism

According to Jeevan *et al.* (2019), maritime tourism is not limited to sea-based activities but extends to the hinterlands. Supported by Selvaduray *et al.*, 2022, maritime tourism is divided into three segments: foreland, seaport, and hinterland. The maritime tourism industry is one of the world’s fastest growing industries which has acted as an economic catalyst in coastal countries and has a bright future (Diakomihalis 2007b; Lam-González, León, and de León 2019). Nature exploration in the hinterland area could be a new type of hinterland tourism activity. Train tourism could be developed since the railway provides the principal mode of transportation for freight and passengers. Maritime tourism contributes as much as or more than other sectors to a country’s GDP (Selvaduray *et al.*, 2022b). As a result, maritime tourism is a significant economic activity in many maritime nations.

Smart Maritime Tourism

Smart Maritime Tourism (SMT) is a new type of maritime tourism that employs Virtual Reality (VR) to encompass and change the foreland, seaport, and hinterland segments of the industry (Selvaduray *et al.*, 2022a; Selvaduray *et al.*, 2022b). It has the potential to transform the industry into VR. In response to the new wave of digitalisation, these SMT strategies take a novel marketing approach. When it comes to solving the problems that the current maritime tourism market is experiencing, SMT is a highly effective and efficient method of doing so. Moreover, virtual tourism is a hybrid concept that combines virtual reality and tourism. It allows people to participate in tourism without having to travel. Virtual tourism takes many forms and requires varying technological expertise (Skard *et al.*, 2021; Merks and Nawijn, 2021). SMT activities utilising elements of the Fourth Industrial Revolution (Buhalis and Amaranggana 2015; Selvaduray *et al.*, 2022b).

Methodology

This paper adopted the qualitative research methodology where content analysis was chosen to code the theme by using Nvivo 12. This research seeks to identify the issues faced by Malaysian seaports to adapt the OBOR initiative and propose the best solution to overcome the issue. Moreover, in-depth interviews were conducted with maritime stakeholders to archive the objective of this study. Two questions were framed after the literature review:

- 1) What challenges did Malaysian seaports face to adapt the One Belt One Road initiative?
- 2) What will be the best solution to overcome the issue from your previous answer?

These questions were developed based on specific criteria, including the inclusion of open-ended and general questions (Creswell, 2013). The convenience sampling method was utilised to invite 15 maritime experts from the ministry of transportation, port authority, and marine department to participate in this study (Klassen *et al.*, 2012). The questionnaires were distributed to maritime professionals with extensive knowledge of the port and ocean trade industries. This information is useful to researchers investigating Malaysian preparations for the new trade route. The information was gathered through an interview session and will be analysed using content analysis.

Data Analysis

This study used content analysis with the Nvivo 12 approach method for the process of coding. Nvivo 12 is an application for computer-assisted qualitative data analysis (CAQDAS). The data were analysed using a content analysis technique while keeping the study's context in mind (Ritchie *et al.*, 2013). The process of coding is to find the result of the study, which is answered the research question.

Results

The interview session included six participants from three different organisations; the ministry of transportation, the port authority, and the marine department. The results will be presented in this section, and the discussion will answer the research objective. Table 1 below presents the experts who participate in the interview session.

become one of the issues in the Malaysian maritime sector. According to the marine department, the majority of employees in the maritime sector, particularly onboard, are from outside the country.

Solution Proposed by the Maritime Experts

A strategy is a plan to achieve the desired future, such as achieving a goal or solving a problem. During the interview session, all of the suggestions were made by maritime experts from the three different organisations. The following is a suggestion for resolving the problem. In order for the large vessel to enter the port, the port must be upgraded the port area as well as the capacity. For example, Port Klang intends to add the 8 valves for port extension in the North Port to make it easier for ships to enter the port without waiting longer.

Moreover, the depth of the shipping channel can impact the ship's berthing at that port. The mega ship cannot dock at a port with a shallow shipping channel. For example, Port Klang intends to dig up to 18 metres of the shipping channel to allow the ship to enter the port. So that the ship can arrive on time and not have to wait any longer, this is one method of encouraging mega-ships to dock in the port. The strategic location of Port Klang may entice shippers to berth at the port. Port Klang has also met the criteria for being proud of and meeting international standards. Malaysian seven major ports, including Port Klang, Johor Port, Port of Tanjung Pelepas, Penang Port, Kuantan Port, Kemaman Port, and Bintulu Port, must meet international requirements standards.

In order to cater for a modern ship, which requires modern equipment to handle, the technology must be modern and up to date. Modern technology can assist in catering mega ships such as VLCC, ULCC, China shipping, and Maersk. To keep up with modern technology, the staff must also

be proficient in using computers and other equipment. To cooperate with OBOR, new or up-to-date technology is required to handle the vessel, particularly the mother vessel. For example, Port Klang has the modern technology required to handle the ship at the port. That is one of the reasons why Port Klang has been chosen by the most connected index shipping and is ranked number 12 worldwide (Jeevan *et al.*, 2021). Port Klang keeps their technology up to date and follows current events to compete with other ports. So that the cargo and container can be moved smoothly from one location to another, rubber tyre stacking cranes, quay cranes, trailers, straddle carriers, dockyard cranes, pilotage, and other machinery will be required at the port. There are occasionally delays at the dock, but they are uncommon.

The government can provide a module for the maritime sector programme to improve the maritime crew's readiness and knowledge. In order to attract more local people to join, the government can also provide training to locals and publicise the benefits of working in the maritime sector. Educating the maritime employees will be more efficient in completing a task in the shortest amount of time and effort. Hence, productivity will be developed during the port operations. These two factors are crucial in competing with other ports and influencing ships to berth at that port. Good efficiency and productivity can ensure the success of a port. This seaport operation should consider safety features because it involves life and property. All of the merchant shipping regulations of a country and conventions are unique. Malaysia also has its own set of maritime regulations and conventions. If an accident occurs, this convention will be followed. Maritime accidents on the Malaysian coast and in its waters are uncommon compared to other countries.

One of the systems used to control

port safety and traffic is the Vessel Traffic Management System (VTMS). They have complete control over the ship's movements from the control tower. The International Ship and Port Facility Security Code (ISPS Code) was also in effect at the port. It supplements the 1974/1988 Safety of Life at Sea (SOLAS) Convention on basic security procedures for ships, ports, and government institutions (Solcanu *et al.*, 2021). Every ship must disclose its state or condition before entering a port. The ISPS Code introduced Maritime Security (MARSEC) into three levels. Level 1 is the ship's or port facility's normal operating level daily. Level 2 is a high level for a specific period in which a security officer has identified security risk. Level 3 will include additional security measures for an upcoming or recent occurrence that must be kept up for a limited time (Solcanu *et al.*, 2021). The security measure must be implemented even if no specific target has

been identified. Apart from that, most of the solutions focused on the port operation. However, the problems still have not been solved, which could have a detrimental effect.

This study introducing the maritime tourism market can be an alternative to cope with the OBOR initiative because train tourism (hinterland tourism) could be developed since the railway provides the principal mode of transportation for freight and passengers. When the current strategies are integrated with the Industrial Revolution 4.0, the most desired outcome is Smart Maritime Tourism (SMT) in conjunction with the OBOR initiative. These novel strategies will help the Malaysian seaport sector enter a new era of SMT. Figure 4 below shows the summary of the novel framework to adapt maritime tourism into the OBOR strategy.

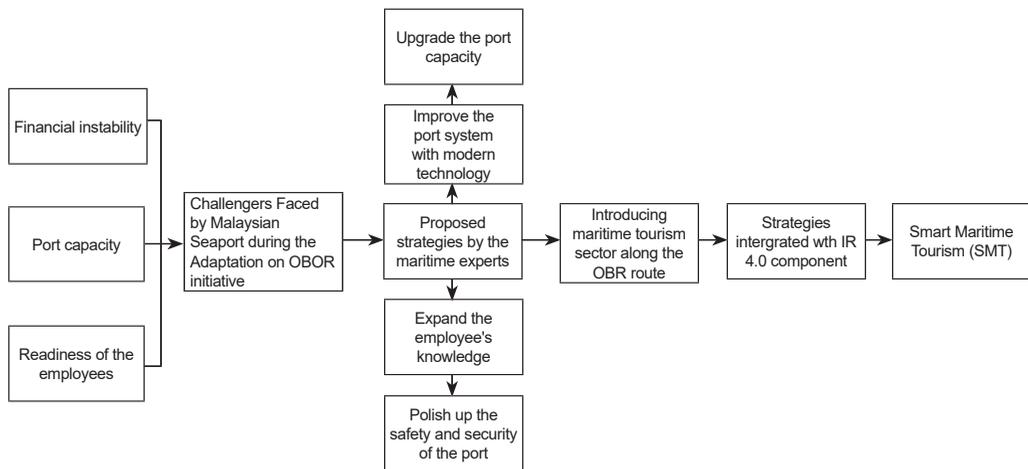


Figure 4: A novel framework to adapt maritime tourism into OBOR strategy

Conclusion

Throughout the content analysis, this study is to identify the challengers to OBOR and strategies to cope with the OBOR in Malaysian Seaports. The outcome shows that Malaysia suffers from financial instability, lack of port capacity, and poor

employee readiness. This study proposes a novel framework to adapt maritime tourism as a new business market into OBOR strategy to solve the issues. Introducing maritime tourism can potentially develop the OBOR initiative in the Malaysian seaport sector. Moreover, there is a need for

deep integration of IR 4.0 with the current strategies for a better outcome (Smart Maritime Tourism). In the future, extended research will be conducted based on the current result on how maritime tourism will cope with the OBOR initiative to gain more profits and benefits along the road. Although OBOR implementation is one of the topics discussed the most around the world, only a few studies have been done on the Malaysian maritime transportation industry case.

Disclosure statement

No potential conflict of interest was reported by the author(s).

REFERENCES

Agatić, A., Čišić, D., Perić Hadžić, A., & Poletan Jugović, T. (2019). The One Belt One Road (OBOR) initiative and seaport business in europe—Perspective of the Port of Rijeka. *Pomorstvo, Scientific Journal of Maritime Research*, 33(2), 264-273.

Bloor, M., & Sampson, H. (2009). Regulatory enforcement of labour standards in an outsourcing globalized industry: The case of the shipping industry. *Work, Employment and Society*, 23(4), 711-726.

Clark, X., Dollar, D., & Micco, A. (2004). Port efficiency, maritime transport costs, and bilateral trade. *Journal of Development Economics*, 75(2), 417-450.

Corbin, J., & A. Strauss. (2008). Strategies for Qualitative Data Analysis. In *Basics of Qualitative Research: Techniques and procedures for developing grounded theory*. Thousand Oaks, CA: Sage.

Creswell, J. W. (2013). *Research Design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: SAGE.

Funding

No Funding.

Notes on contributors

Mahendrran Selvaduray
Chowdhury Pretom
Norhaslinda binti Yunus

ORCID ID

Mahendrran Selvaduray <https://orcid.org/0000-0003-4725-8052>
ICASSA, 1-9.

Da Xu, L. (2016). An internet-of-things initiative for One Belt One Road (OBOR). *Frontiers of Engineering Management*, 3(3), 206-223.

Dar, K. B., & Seng, T. C. (2021). The road and belt initiative in Malaysia: Challenges and recommendations. *Akademika*, 91(3), 79-91.

Jeevan, J., Yeng, C. K., & Othman, M. R. (2021). Extension of the Seaport Life Cycle (SLC) by utilising existing inland capacity for current and future trade preparation. *The Asian Journal of Shipping and Logistics*, 37(1), 45-60.

Johnson, P. (2015). The One Belt One Road Policy - History, trends and possibilities. *ICASSA*, 1-9.

Klassen, A. C., J. Creswell, V. L. Plano Clark, K. C. Smith & H. I. Meissner. (2012). Best Practices in Mixed Methods for Quality-of-Life Research. *Quality of Life Research*, 21(3), 377-380.

Koboević, Ž., Kurtela, Ž., & Vujčić, S. (2018). The maritime silk road and China's belt and road initiative. *Naše More*, 65(2), 113-122, <https://doi.org/10.17818/NM/2018/2.7>

- Salleh, N. H. M., Riahi, R., Yang, Z., & Wang, J. (2017). Predicting a containership's arrival punctuality in liner operations by using a fuzzy rule-based bayesian network (FRBBN). *Asian Journal of Shipping and Logistics*, 33(2), 95–104. <https://doi.org/10.1016/j.ajsl.2017.06.007>
- Salleh, N. H. M., Zulkifli, N., & Jeevan, J. (2021). The emergence of very large container vessel (VLCV) in maritime trade: Implications on the Malaysian seaport operations. *WMU Journal of Maritime Affairs*, 20(1), 41-61.
- Sánchez, R. J., Hoffmann, J., Micco, A., Pizzolitto, G. V., Sgut, M., & Wilmsmeier, G. (2003). Port efficiency and international trade: Port efficiency as a determinant of maritime transport costs. *Maritime Economics & Logistics*, 5(2), 199-218.
- Selvaduray, M., Bandara, Y. M., Zain, R. M., Ramli, A., & Mohd Zain, M. Z. (2022b). Bibliometric analysis of maritime tourism research. *Australian Journal of Maritime & Ocean Affairs*, 1-27.
- Selvaduray, M., Suhrab, M. I. R., Somu, R., Jeevan, J., Mohd Salleh, N. H., & Zain, R. M. (2022a). The fourth industrial revolution: A catalyst for regional development in Malaysian seaport sector. *Australian Journal of Maritime & Ocean Affairs*, 1-12.
- Sgouridis, S. P., Makris, D., & Angelides, D. C. (2003). Simulation analysis for midterm yard planning in container terminal. *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 129(4), 178-187.
- Solcanu, V., Gaiceanu, M., & Rosu, G. (2021). Study of resistance to disturbances of the main types of communication systems on board military ships used during interception or search and rescue missions. *Inventions*, 6(4), 72.
- Tongzon, J. L., & Ganesalingam, S. (1994). An evaluation of ASEAN port performance and efficiency. *Asian Economic Journal*, 8(3), 317-330.
- Wang, C., Haralambides, H., & Zhang, L. (2021). Sustainable port development: The role of Chinese seaports in the 21st century Maritime Silk Road. *International Journal of Shipping and Transport Logistics*, 13(1-2), 205-232.
- Yii, K. J., Bee, K. Y., Cheam, W. Y., Chong, Y. L., & Lee, C. M. (2018). Is transportation infrastructure important to the One Belt One Road (OBOR) initiative? Empirical evidence from the selected Asian countries. *Sustainability*, 10(11), 4131.
- Zhang, Y., Liu, Y., Zhang, Y., & Chen, X. (2022). Globalization blueprint and households' fintech debt: Evidence from China's one belt one road initiative. *International Review of Economics & Finance*.

