

**ASSESSING THE TRADE ROUTES CONNECTIVITY BETWEEN
ASIA AND EUROPE THROUGH BELT AND ROAD INITIATIVE**

Hyun-Deok Kim*, Oh Kwangmook, Seon hwa
Department of Logistics Management,
Sunchon National University,
Sunchon City, Korea

* Corresponding author, email address: hdkim@sunchon.ac.kr

ABSTRACT

The ‘One Belt One Road’ or ‘Belt and Road initiative’ by the Chinese government, involving 65 countries and regions, and about 63% of the world population, is attracting fast growing interest across different countries. The vision of China is to build faster connectivity routes and increase trade along the land- and sea-based Silk Road, linking Asia with Europe and Africa. New roads, railroads, pipelines, ports, airports, and inland telecommunications links are to boost the efficiency of overland travel and economic transactions across Europe and Asia (Eurasia). The Belt and Road is thus symbolized global economic and cultural networking based on mutual interaction and cooperation. Since China’s dependence on foreign oil and gas is so high, obtaining reliable transport routes and diversifying transport routes by procuring oil and natural gas from the energy-rich Central Asian region through the construction of the land-based Silk Road is of critical importance to China’s energy security. This paper therefore aims at investigating the OBOR’s development potentials trade routes to Europe from Asia across the Strait of Malacca and Suez Canal. Thus Egypt can play a main role in China’s Belt and Road initiatives due to its strategic geographic location. Furthermore, this paper reveals many points for cooperation with the Eurasia Initiative (EAI) of the Korean government and ways to construct of Silk Road Express with a trans-Korea railway and transcontinental railroads to promote peace on the Korea Peninsula. Finally, the paper focuses on Oil and gas import trade routes from Middle East to China (connecting Kyaukpyu to Kunming) crossing Myanmar. Consequently, the study develops these trade routes by fostering greater and faster connectivity between China and Europe via intermediate points in Central, West, and South Asia as well as Russia. Although the empirical evidence is limited, the results support valuable conclusion for trade connection routes from East to West.

Keywords: Belt and Road Initiative, trade routes, mutual interaction and cooperation, Eurasia Initiative (EAI), energy security.

1. INTRODUCTION

The Silk route was an ancient network of trade routes that were for centuries central to cultural interaction through regions of the Asian continent connecting the East and West from China to the Mediterranean Sea (Wikipedia). The Marine Silk Road began around 2000 years ago, and it was an important marine lane linking the East and the West in history (Huan Zhang, Xiao Ruan, Xuehao Feng, 2016). For example, scarce commodities that are only available in certain locations, such as oil and gas from Middle East to China transport through both this trade routes since long time ago.

On the other hand, trade routes development, globalization and trade liberalization have benefitted China by making it the world’s largest manufacturing center and the country has emerged as an engine of Asian economic growth (McGregor, 2006). However, in recent years, China has faced a slowdown of its domestic economy that has affected global and inter-regional trade (Timer et al., 2016). China witnessed its rapid economic development due to massive capital investment. Cheap labor and large capacity of Chinese manufacturers were the main factor to become the world’s largest exporter. Meanwhile, the rapidly increased wage over the past few years greatly increased the production costs of China while urging Chinese manufacturers to move their factories in China to the countries of providing cheaper labor.

Furthermore, investment-led economy caused excess capacity in steel, building materials, and shipbuilding, which is required to be consumed somewhere else (Huang 2016). In order to overcome this falling-off, the Chinese authorities have recently made various foreign trade policies and transnational agreements have been made. One of them is reviving the ancient silk route (Mark, 2014) into the New Economic Silk Belt that links China overland to Europe, through Central and Western Asia, and the Maritime Silk Road that connects China and Southeast Asian countries to Europe via the sea to Africa and Mediterranean sea. The two initiatives are jointly referred to as the “One Belt-One Road” (OBOR) Initiative, aims at supporting a paradigm shift in the inter-regional and foreign trade (Jiao & Zhang, 2013; Lehman Brown, 2016).

'Belt and Road' programs in areas of not only “rigid connection” such as energy and infrastructure but also “soft connection” such as education, culture, medical care and telecommunications between China and those countries along the routes have been expanded. If the "rigid connection" of the Belt and Road draws countries geographically closer, then the "soft connection" brings people together. This paper presents about of three different important trading key areas from Asia to Europe.

THE INTERNATIONAL MARITIME TRANSPORT & LOGISTICS CONFERENCE
(MARLOG 6)
GLOBAL INTEGRATION IN PORTS “FUTURE OPPORTUNITIES”
19 - 21 MARCH 2017

- The **First** is the Arabian Sea hubs with the Persian Gulf and the Red Sea via Suez Canals the gateways to the West Asian and European terminals and markets of the Silk Road.
- The **Second** is the world of Bay of Bengal connecting the Indian subcontinent across the Bengal to the Southeast Asia via Strait of Malacca and alternative supply chain channel – Kra Canal.
- The **Third** trading world leads to the Eurasia economic community (Eurasia Initiative), which encompasses Asia and Europe, the South China Sea world which consists mainly trade of goods and products China and Korea Peninsula. Figure 1 presents the shipping key points of Maritime Silk Road.



Fig. 1. Shipping key points of Maritime Silk Road

Source: Haralambides.H.E, 2016, OBOR Networks & Maritime Geopolitics: The Century of Eurasia)

2. LITERATURE REVIEW

The idea for a trade route focusing on Silk Road connecting Han China and Rome was firstly proposed by the German Geographer Ferdinand Freiherr von Richthofen (1833–1905). Talat A. Wizarat defined ancient trade routes played an important role in promotion of economic ties and cultural linkages. Some of these routes cannot be revived due to technological and political changes.

But once trade networks established, these roads also facilitated cultural exchange _ including the spread of religion, ideas, knowledge, and sometimes, even disease.

Trade routes have played an important role in promoting prosperity at the regional and extra-regional level. They helped political, economic and social interaction among societies in their scope. Despite existence of some elements of competition and conflict, trade routes create more cooperation than conflict. The trade routes presented a beneficial network with corridors on land and sea. (Talat A. Wizarat). The OBOR project reflects China’s economic expertise in financing comparatively low-cost manufacturing or infrastructure initiatives, and China’s global economic demand (eg, easier access to ports and new sources of energy). For example, a new trade route project by the Belt and Road initiative will continuously highlight investment opportunities such as the Egypt’s Suez Canal, energy production in Pakistan, and port development in Indonesia (Xinhua, 2017). Consequently, trading connectivity network unlock massive investment potential and booster economic and infrastructure development, tourism and social sector development along the routes (Huan Zhang, Xiao Ruan, Xuehao Feng, 2016).

3. THEORETICAL BACKGROUND OF OBOR

The “Belt” will be a network comprising of rail routes, overland road, oil and natural gas pipelines, and other infrastructure projects. The “Road” is a maritime network of port and other coastal infrastructure from South and Southeast Asia to East Africa and the northern Mediterranean Sea (The one belt, one road initiative, 2016).

The main difference between the Maritime Silk Road and the Silk Road Economic Belt is that the shipping routes between Asia and Europe are already heavily used, while shipping overland by train is still limited and has yet to enter the high-speed phase.

The OBOR program aims to connect Asia, Europe and Africa to five routes, as illustrates in Figure 4. The Silk Road Economic Belt (1) connects China and Europe through Central Asia and Russia; (2) connects via Central Asia to the Middle East and China and (3) brings together China and Southeast Asia, South Asia and the Indian Ocean. Meanwhile, The Maritime Silk Road focuses on linking China and Europe using coastal ports of China: (4) links China with Europe go through the Strait Malacca, Colombo, Gwadar, Persian Gulf, Port Said (Suez Canal), Piraeus, Venice, Rotterdam (through the South China Sea and Indian Ocean); and (5) connects the South Pacific Ocean and China through the South China Sea.

THE INTERNATIONAL MARITIME TRANSPORT & LOGISTICS CONFERENCE
(MARLOG 6)
GLOBAL INTEGRATION IN PORTS “FUTURE OPPORTUNITIES”
19 - 21 MARCH 2017



Fig 2. OBOR Networks

Source: Haralambides.H.E, 2016, OBOR Networks & Maritime Geopolitics: The Century of Eurasia)

Belt and Road focusing on the five routes above is to build six international economic cooperation corridors, as shown in Figure 3, by strengthening cooperation using international transportation routes as well as major ports with core cities. These have been identified as the New Eurasia Land Bridge, China-Mongolia-Russia, China-Central Asia-West Asia, China-Indochina Peninsula, China-Pakistan, and Bangladesh-China-India-Myanmar. (HKTDC, Belt & Road)

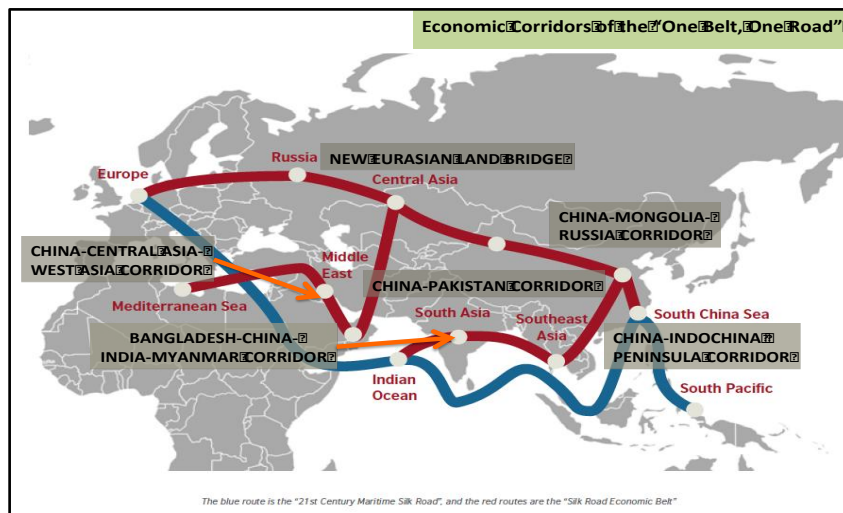


Fig 3. Economic Corridors of the “One Belt, One Road”

Source: A role for UK companies in developing China’s new initiative, pp. 7-14

THE INTERNATIONAL MARITIME TRANSPORT & LOGISTICS CONFERENCE
(MARLOG 6)
GLOBAL INTEGRATION IN PORTS “FUTURE OPPORTUNITIES”
19 - 21 MARCH 2017

As shown in Figure 4, the five major goals of the Belt and Road Initiative are:

- policy coordination,
- facilities connectivity,
- unimpeded trade,
- financial integration, and
- strengthening people-to-people bonds.

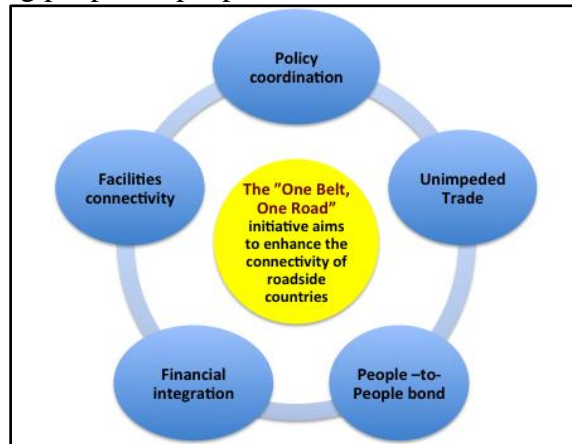


Fig. 4. Five major goals of Belt and Road Initiative

Source: Navigating the Belt and Road – Financial sector paves the way for infrastructure, pp.6

4. BELT AND ROAD INITIATIVE IN REALITY

Belt and Road Initiative provides opportunities for a initiative of China, as well as global economic growth. According to the Belt and Road Initiative program, the following projects have been started. Many other projects are in progress as well.

- The second phase contract of the China-Laos railway project is signed in Lao Vientiane in October 2016 and construction of this project, which began in the second half of 2015, is expected to be completed with 5 years. When the railroad is completed, a trip to the Chinese border in Vientiane will end in only 4 hours, turning Laos from a landlocked country into a land-linked nation.
- On January 21, 2016, the Jakarta-Bandung high-speed railway launched in Walini, West Java Province, the country's first ever high-speed railway project. Once the project is completed at a design speed of 350 km per hour, travel time between Jakarta and Bandung will be shortened to less than 1 hour over 3 hours.
- Chinese shipping company COSCO acquired 67 percent of the shares of the Piraeus Port Authority through the Athens Stock Exchange and officially become the controlling shareholder of the Greek port on 10th August

2016. Piraeus will be operated as a hub in Europe for the Maritime Silk Road, and connect the Economic Belt with the China-Europe Land-Sea Express Line. Piraeus was not simply an economic project but a role as a bridge connecting Greek and Chinese people.

- In Africa, Ethiopia-Djibouti railway was officially opened on the milestone of cooperation between China, Ethiopia and Djibouti.
- In Cambodia, Sihanoukville Special Economic Zone involved hundreds of companies and provided a collaboration model of China-Cambodia according to Belt and Road Initiative.
- In Myanmar, a consortium of six foreign companies led by China Council Union (CITIC) received two biddings for the construction of an industrial park and a deep-sea port in the Kyaukpyu Special Economic Zone in Rakhine State. It is planned to improve employment and country's infrastructure.
- In Sri Lanka, the green light has been given to the delayed Colombo Port City. Through the Maritime Silk Road, China will support until it becomes maritime transportation, logistics and financial hub in the Indian Ocean. (Xinhua, 2017)

5. ANALYSIS OF THE PERFORMANCE OF THREE TRADE AREAS THROUGH OBOR

1. Suez Canal

Suez Canal is the first gateway to West Asia, European terminals and China, East Asia and Southeast Asia markets. The opening of the Suez Canal in 1869 only increased its importance by reducing the distance between Europe and the Far East becoming a key link between the Pacific and Indian Oceans, reducing the distance between Europe and the Far East by a third. The Maritime Road links China's port facilities with African coast, enters into the Mediterranean through the Suez Canal. Egypt is a particularly crucial part of the Maritime Silk Road, where the Suez Canal functions at the main transit points of the Indian Ocean and the Mediterranean. That makes Egypt 'pivot' or 'hub' for the Belt and Road. Both sides agreed to work with the Belt and Road and signed Memorandum of understanding. Chinese companies have participated in major projects in Egypt, such as developing the Suez Canal Corridor and building a new administrative capital on the outskirts of Cairo. In addition, the economic cooperation of China-Suez Economic and Trade Cooperation Zone creates more than 10,000 jobs in Egypt (Shannon Tiezzi, 2016).



Fig. 5. Suez Canal

2.1 Strait of Malacca

The second is the Strait of Malacca and links to Southeast Asia between Indonesia, Malaysia and Singapore that across the Indian subcontinent by the Bay of Bengal. It is a major gateway to trade to which travels to and from Asia for a long time. It has been used since ages as a second busiest channel in the world. More recently, it has played a major transit route to supply vital commodities for fueling the rapid-growing Asia and beyond. In 2011, as shown in Figure 6 of 87 million barrels crude oil demand being produced on a day, demand for oil of about 15.2 million barrels that passed the Strait of Malacca. It is the shortest route between suppliers in Africa and Persian Gulf and Asian markets.

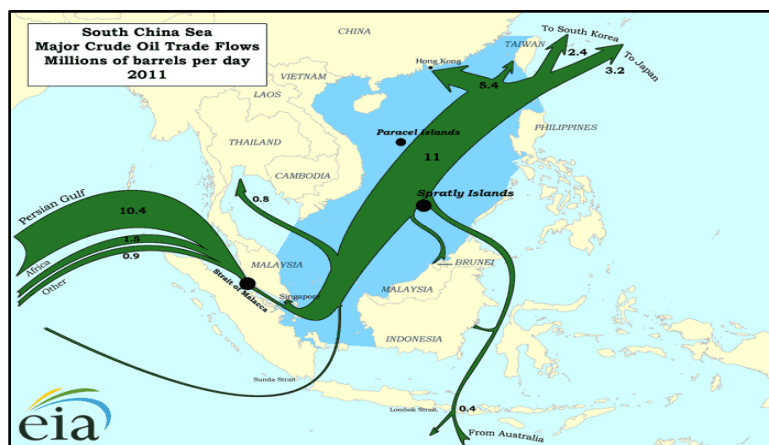


Fig.6. Crude oil and Petroleum shipping flow through Strait of Malacca
Source: World Economic forum

THE INTERNATIONAL MARITIME TRANSPORT & LOGISTICS CONFERENCE
(MARLOG 6)
GLOBAL INTEGRATION IN PORTS “FUTURE OPPORTUNITIES”
19 - 21 MARCH 2017

Figure 7 below illustrates that the amount of Crude oil and Petroleum products passing through the Malacca Straits is four times the amount through the Suez Canal and 19 times the amount passing through the Panama Canal over the same period.

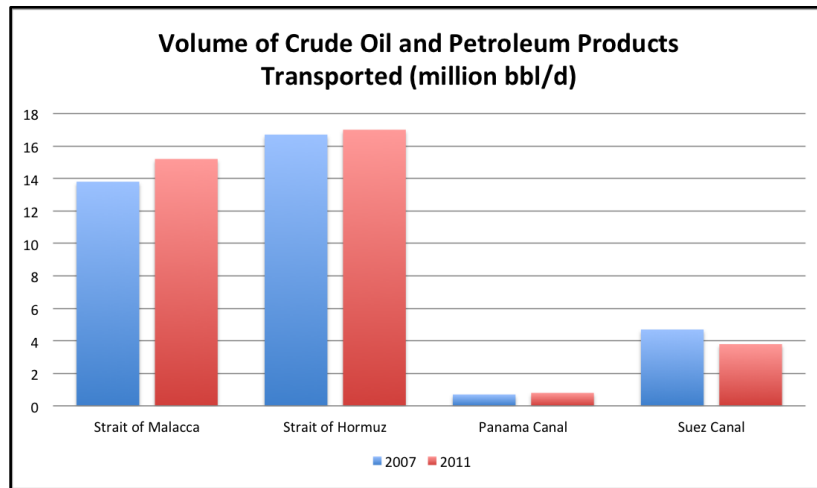


Fig. 7. Volume of Crude oil and Petroleum Products Transport

Source: World Economic forum

China's dependence on foreign oil and gas is very high. 80 percent of crude oil imports, 50 percent of natural gas imports, and 42.6 percent of the entire China's imports and exports are transported through the Malacca Strait. Therefore, by procuring oil and natural gas in the energy-rich Central Asian region through the construction of the land-based Silk Road and obtaining reliable transport routes is important to China's energy security.

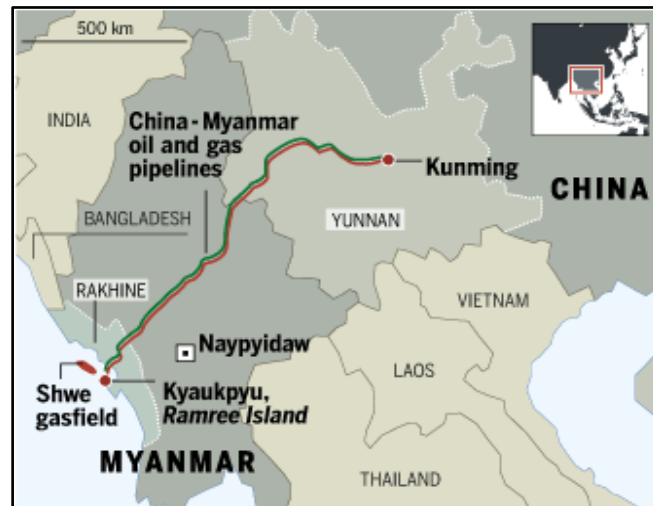


Fig.8. Kyaukpyu-Kunming gas and crude oil pipelines

In relation to this, during the past few years, China has invested heavily in constructing new pipelines for transporting gas and oil on land in order to ease congestion of the Strait, with a Myanmar-China gas pipeline completed in October 2013. A parallel crude oil pipeline was completed in 2014m as shown in Figure 8, so China crude oil imports have not been gone through the Strait of Malacca. China has built a major port at Kyaukpyu in west of Myanmar. Oil and gas pipelines connect Kyaukpyu and Kunming. It is 700 miles away from oil shipped in Africa or the Middle East, cuts delivery times by 30 percent, and avoids the need to transit the strategic chokepoint of the Malacca Straits.

2.2 Alternative Supply Chain channel _Kra Canal

Kra Canal is a potential new channel of the Maritime Silk Road. Its construction affects regional trade patterns and shipping paths, so it affects the distribution of shipping networks and the evolution of hub ports. The opening of the Kra Canal shifts traffic volume of the Malacca Strait, affecting the transshipment volume of other hub ports and promoting the evolution of the shipping network patterns. The hub degrees of Singapore, Klang and Tanjung Priok ports decrease and the degree of hub at Shanghai, Hong Kong, Pusan and the Kra Canal port will increase.

The Kra Canal connects to the Andaman Sea, crossing Kra Isthmus in southern part of Thailand, known as the “Oriental Panama Canal”. Compared to the existing major route of the Malacca Strait, the Kra Canal shortens the average shipping distance about 1200 kilometers between Thailand’s west and east region. As a consequence, the Kra Canal route becomes an attractive “Golden Waterway”. By opening Kra Canal, shipping distance between Europe and East Asia ports are directly shortened, so time and cost for shippers can be reduced.

Major changes in the liner transport network also take place, improving accessibility and connectivity. Therefore, this new shipping route will change more and more attractive to the shipping companies, and changes the market share of regional hub ports will affect the status of the regional ports.



Fig.9. Kra Canal

3. The Eurasian Initiative

The third most trading key point is the South China Sea trading routes with the circulation of the Chinese market in the Korea Peninsula through the Eurasian community connecting Asia and Europe. Eurasia accounts for 40% of the world's land and 70% of the population, is home to most of the world's top 10 economies including the EU, China, Russia and India.

To order to stimulate the economy and achieve sustainable prosperity and peace in Eurasia, the Korean government proposed the Eurasia Initiative (EI) in 2013. EI is known not only to provide new investment and employment opportunities but also to offer potential for new generations by linking energy and logistics infrastructure across Asia and Europe. Nevertheless, Korea's geography due to its position and the complex political considerations of the Korean Peninsula, progress has hardly been done in recent years.

Under such circumstances, OBOR Initiative, a development strategy and framework proposed by the Chinese government in 2013, provides opportunities to achieve EI's ambitious goals. For example, by using the new Eurasian Continental Bridge promoted by the OBOR Initiative, South Korea can reduce transportation time and logistics cost when importing and exporting products to and from Central Asia and Europe. As a result, South Korea's international market and international trade are expected to expand to participate in the OBOR

THE INTERNATIONAL MARITIME TRANSPORT & LOGISTICS CONFERENCE
(MARLOG 6)
GLOBAL INTEGRATION IN PORTS “FUTURE OPPORTUNITIES”
19 - 21 MARCH 2017

Initiative, which calls for improved connectivity of the transportation network.
(Kevin X. Li, Tae-Joon Park, Paul T.W. Lee, Wenming Shi, 2016)

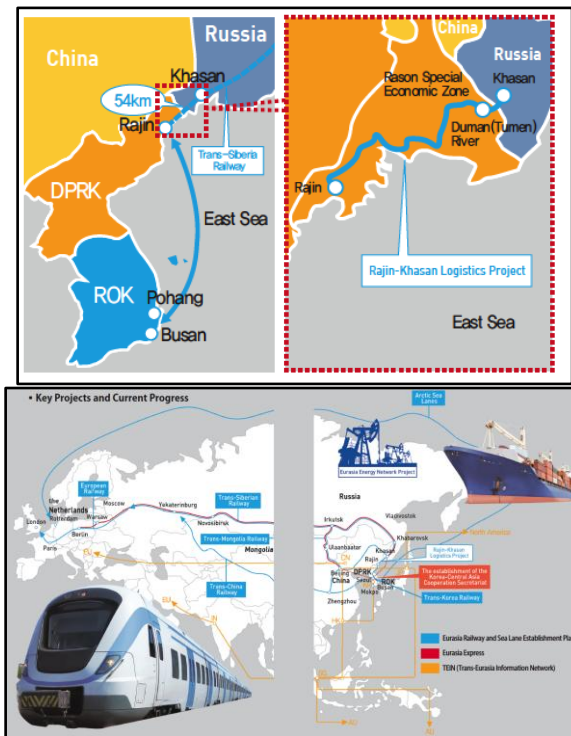


Fig. 10. Eurasia Initiative

Source: Eurasia Initiative, MOFA

As shown in Figure 10, the Korean government is to construct corridors for the trust and peace on the Korean Peninsula through the Rajin-Khasan Logistics Project and encourage North Korea to open the way for change. (Eurasia initiative, mofa)

6. CONCLUSION

Connection trade routes between China and Europe through Belt and Road form the historical geography for the historical development of the Mediterranean, the Indian Ocean, Southeast Asia and the South China Sea. Under the initiative of China, the ancient land road Silk Road and Marine Road revive to the modern Economic Silk Belt and Maritime Silk Road.

In this paper, three trading key points along the Maritime Silk Road are evaluated. The first study evaluated in Egypt, which is a particularly crucial part because the Suez Canal acts as a major transit point in the Indian Ocean and the

Mediterranean. The reconstruction of Suez Canal contributes to a far deeper and widespread connection of the Mediterranean Sea, the Persian Gulf, the Horn of Africa, connecting across the Indian Ocean and the South China Sea.

The second study finds that Kyaukphyu-Kunming gas and crude oil pipeline route reduces the delivery time and avoid the dependency of chokepoint in the Straits of Malacca. On the other hand, a potential alternative shipping route to Maritime Road is Kra canal, shortening the trade route network connecting along the ports of South and Southeast Asia to East Africa and northern Mediterranean Sea by comparing to the current main route through the Strait of Malacca. Kra Canal will be an active participant shaping the development of a Maritime Silk Road.

The third key point in trade routes is in the South China Sea. South Korea can promote the peace of the Korea Peninsula and reduce transportation time and logistics costs by using the new Eurasian Continental Bridge and transcontinental railroads promoted by the OBOR Initiative.

Observation from the three trade routes points, the Belt and Road Initiative will create international transport routes as well as key ports to further strengthen collaboration between Asia and Europe. Furthermore, these key points are alternative and reliable transportation routes that mitigate the risks of China's energy security problems. In conclusion, the Belt and Road Initiative is a way of promoting win-win cooperation to foster common development and prosperity, to develop peace and friendship, to enhance mutual understanding and trust along the Belt and Road trade routes.

7. REFERENCES

1. Kolar, P. and Schramm, H.J., 2016, Trans Asia Railway: Containerized Trade Opportunities and Challenges for Central and East European Landlocked Markets.
2. Park, H. and Chang, Y.T., 2016, Infrastructure Charge and Capacity Investment: The Case of One Belt One Road.
3. Huang, A. Yao, L. and Yang, Z., 2016, Challenges and Opportunities of the One Belt and One Road Initiative.
4. Balbina Y. Hwang, 2016, A Fork in the Road? Korea and China's One Belt One Road Initiative.
5. Talat A. Wizarat, Reviving Historical Trade Routes: A Case Study of the Silk Route - Gateway to China
6. The one belt, one road initiative, pp. 10-11, MOFA
7. Zeng, Q. Grace, W.Y. Wang, Kevin Li. Qu, C., 2016, Impacts of Carat Canal on the evolution of hub ports along the 21st Century Maritime Silk Road

THE INTERNATIONAL MARITIME TRANSPORT & LOGISTICS CONFERENCE
(MARLOG 6)
GLOBAL INTEGRATION IN PORTS “FUTURE OPPORTUNITIES”
19 - 21 MARCH 2017

8. Kevin X. Li, Tae-Joon Park, Paul T.W. Lee, Shi, W., 2016, Korean Connectivity of container transportation with OBOR Initiative.
9. HKTDC, Belt & Road _<http://beltandroad.hktdc.com/en/about-the-belt-and-road-initiative/about-the-belt-and-road-initiative.aspx>
10. Xinhua, 2017, China's Belt and Road Initiative promotes connectivity, development along ancient route
11. Hirst, T. 2014, World most Important Trade Route
12. Eurasia initiative, www.mofa.go.kr
13. International Institute for Asian Studies
14. Article of Suez Canal boost from OBOR road, Iran opening up, 2016
15. Hwang, B. Y., 2016, A fork in the road? Korea and China, OBOR Initiative
16. CLSA, A brilliant Plan, OBOR
17. Guan, K. C. 2016, The Maritime Silk Road: History of an India
18. Haralambides, HE., 2016, OBOR Networks & Maritime Geopolitics: The Century of Eurasia
19. Huan, Z. Xiao, R. Xuehao, F., 2016, The Primary Exploration of Concept “Beautiful Island Tourism Belt” of New Marine Silk Road Strategy
20. Chengpeng, W. Zaili, Y. Di, Z. Shiqi, F. Xinping, Y., 2016, Resilience in transportation systems: A systematic review and future directions.
21. Zhi, H. H. Chan, J. L. Yang, H. 2016, Ranking maritime port based on a network of vessel flows