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# THE TRANSPORTION CHAIN'S EXPORT CONTRIBUTION TOWARD MALAYSIA'S TOTAL EXPORT FOR 2015-2020.

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## ABSTRACT

The purpose of this research is to determine the transportation sectors' contribution to Malaysian total exports from 2015 to 2020. We use secondary data regression on total export (TE), sea transportation (ST), air transportation (AT), and other transportation in this study (OT). Only air transportation has a significant positive relationship with Malaysia's total exports, according to the findings. This study has added to the body of knowledge and is expected to have practical implications for local governments in strategizing the national import and export sector.

## ARTICLE INFO

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## 1.0 INTRODUCTION

Economic globalisation is critical to any national income, particularly in export activities (Abedin, Ahmad, and Noor 2012). Exports contribute to an increase in the economy's overall total productivity and attract more investment (Abedin et al. 2012). Furthermore, these trade activities (export and import) help to grow other industries such as logistics and transportation, which are critical links in the supply chain of goods and services (Lee and Yoo 2016).

Exporting goods could be done by air, sea, or land. For many decades, sea transportation was the preferred mode of transportation in many economies (Hilmola 2013). However, the importance of air transportation cannot be overstated as a significant contribution to the advancement of modern society (Li, Wang, and Cui 2015). As a result, it raises the question of which mode of transportation actually contributes to the economy.

The primary goal of this study is to determine the significance of each transportation sector to national export. Malaysia's export activities are chosen as an example because it has been a major exporter of primary products since the nineteenth century (Abedin et al. 2012).

The remainder of the paper is structured as follows: The following section examines previous literature and studies on trade and economic growth. We outline the methodology and explanations for each data set used in the analysis based on the literature. After developing the

model, we begin the analysis by looking at the data's time series properties, then move on to export and transportation analysis. The conclusions are found in the final section.

## 2.0 LITERATURE REVIEW

### EXPORT AND ECONOMIC GROWTH

Scholars have previously investigated the relationship between exports and economic growth. According to Sahoo and Sethi (2018), exports have a positive and greater influence on inflation in India than imports. This should lead to an increase in domestic production capacity as a result of rising exports (Braunerhjelm, Oxelheim, and Thulin 2005). As a result, global exports are expected to grow from USD 25 trillion in 2020 to USD 44 trillion in 2030. (Ministry of Transport Malaysia 2017).

Malaysia's primary export had a greater direct impact on economic growth as an export-oriented economy (Poon and Tong 2009). Malaysia has a long history of exports and economic growth (Rahman et al. 2017). However, according to Abedin et al. (2012), exports contribute insignificantly to Malaysia's economic growth in the short run.

TRANSPORTATION SECTOR

The transportation sector, as one of the basic industries of the economy, is critical to economic development because it connects commodity production, exchange, and consumption (Tian et al. 2020). In recent decades, the transportation industry's consistent growth has been strongly correlated with GDP growth (Krautzberger and Wetzel 2012). Roads and rails were the first modes of trade transportation. The sea and air were then reduced and replaced as modes of transportation for the hinterland (Hilmola 2013).

The primary function of transportation is to provide access to the market for the resulting products (Lee and Yoo 2016). However, different modes of transportation play distinct roles. This study attempts to examine the role of these modes of transportation, primarily sea, air, and other modes of transportation, in exports.

## 3.0 METHODOLOGY

In this study, we used a quantitative approach to determine the relationship between various modes of transportation exports and Malaysia's total exports. From 2015 to 2020, the Malaysian Department of Statistics provided secondary data on total export (TE), sea transportation (ST), air transportation (AT), and other transportation (OT). Six observations were examined in total.

The liner model for this study is developed and expressed in Equation 1 based on the above-mentioned literature review. An Excel spreadsheet was used to perform a regression analysis.

$$〖TE〗_i=β_0+β_1\ 〖ST〗_i+β_2\ 〖AT〗_i+β_3\ 〖OT〗_i+ε_t \quad \text{Eq. 1}$$

Where: 〖TE〗_iis the total export for that year; 〖ST〗_i is the total export via sea transportation for that year; 〖AT〗_i is the total export via air transportation for that year; 〖OT〗_i is the total export via other transportation for that year; and ε_tis the error term.

## 4.0 FINDINGS AND DISCUSSION

The results of the liner regression analysis are shown in Table 1. The findings show that air transportation is significantly positively related to total export. In other words, increased air transportation will result in increased total exports, which will increase the nation's revenue. Sea and other modes of transportation failed to show a statistically significant relationship with exports during the time period under consideration.

Table 1. Regression analysis results

| Variables | Total Exports (TE)** |
|---|---|
| Sea Transportation (ST) | 4.4227 |
| Air Transportation (AT) | 7.8238*** |
| Other Transportation (OT) | -16.9375 |
| Constant | 72725.2791 |
| Adjusted R2 | 0.9792 |
| F-Statistic | 79.6454 |
| No. of observations | 6 |

Note: ** and *** represent the significant level of 5% and 1%

## 5.0 CONCLUSION

The study's goal of investigating the transportation contributions to Malaysia's total export was met. Only air travel has a statistically significant and positive relationship with total Malaysian export. Sea or other modes of transportation have not rejected the null hypothesis (transportation modes have a significant relationship with total export).

This study has limitations of its own. The number of observations is insufficient because data prior to 2015 are unavailable at the Malaysian Department of Statistics. This is due to a change in the reporting of export figures/format in 2015. Prior to 2015, there was no distinction between exports based on mode of transportation. In the long run, similar research can be conducted with a large sample size in future studies.

This study also concentrated on one aspect of economic globalisation. Imports, exports, foreign exchange, and fuel prices are all part of international trade. A future study will be able to compare the transportation chain to these variables.

This is the first study of its kind in Malaysia to measure the transportation chain, and the findings have contributed to the body of knowledge in Malaysian macroeconomics. Furthermore, this study could serve as a model for many new research paradigms in transportation chains.

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