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IMPACT OF TRADE ON THE ECONOMIC GROWTH OF EMERGING ECONOMIES

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ABSTRACT:
This research aims to determine whether the hypothesis that trade is a major determinant of GDP growth (an indicator of economic growth). Since this theory is being adopted by many emerging economies, the selected countries in this research paper are emerging economies (China, India, Indonesia, Malaysia, South Korea and Thailand). To test this theory the regression analysis was used for variables, trade (% of GDP), exports of goods and services (annual% of growth), imports of goods and services (annual% of growth), broad money growth (annual %), inflations GDP deflator (annual %), manufacturing value added (annual % growth)/ industry value added (in case of China). The data for the above-mentioned countries was collected using WDI (World Development Indicators) for the period 1990 - 2014 (time span of 24 years). The results showed that countries that were trade led countries had exports and imports (the factors for indicating trade) as significant factors of economic growth. While the manufacturing led countries had manufacturing growth as the significant factor of economic growth. It is suggested for these countries to adopt new financial, economic and political policies to enhance their economic growth.

INTRODUCTION:

Trade is believed to be one of the factors aiding in the growth of the economy of any country. This discussion of the relationship between trade and economic growth has gained much importance after the rise in the trade liberalisation laws being introduced for countries all around the world. Previous researchers have concluded that economic growth and trade share a strong and important relationship [1]. Some of the researchers have also

established that the industrial revolution's second phase was mainly of international trade becoming a norm in the industrial economies leading them to be advanced and developed in many fields especially in production skills [2]. Another indication of the importance of trade has been highlighted by the report of WTO in 2010 [3], stating that the trade was expected to grow at 9.5% and after the financial crisis faced by many countries in 2016, the growth rate of trade fell to 1.7%. However, recently WTO [3] stated that the growth rate is expected to grow ranging from 1.8% to 3.1% which indicates that much emphasis is put on the increase in trade by countries to rebound from the financial crisis.Many economists have stated trade as one of the major factors for economic growth by providing examples of countries like India and China [4]. All of the above-mentioned presumptions and theories have led many countries into a trade war owing to the importance of trade. This method of economic growth is being adopted by the emerging economies that are on the path of progress and attaining advancement which is illustrated by certain financial indicators such as liquidity in the local debt of the nation [5]. China and Tunisia are examples of such economies since in the past decade they have experienced a rapid growth in their economy [6]. Based on these examples, Tridico [6] went on to term emerging economies as transitional economies due to the drastic reforms their structure and institutions go through due to their shift from being a closed economy to an open economy.One important concept pointed out in a study was that goods imported that help in increasing any sort of production is what actually affects the economic growth positively as was the case for China [7]. As far as the relationship of exports with economic growth is concerned, most of the research papers seem to have similar conclusions. Hatemi [8] established that in Japan, exports and economic growth have a positive causality relationship through the conducting of Granger test. This theory of the relationship between exports and economic growth has been supported by many other studies that have been conducted in developing countries to emphasize the importance of export being a major factor of economic growth. Cockburn & Giordano [9] in their book stated that the expansion of economic growth can be achieved by the help of trade liberalisation as it leads to the reduction in the variations found within pricing of products and also assists in increasing the activities that provide a competitive advantage. Trade helps in economic growth of both emerging economies and industrial economies as has been discussed by Arora and Vamvakidis [10]. Yenokyan, Seater, & Arabshahi [11] stated in their research that in certain circumstances and countries activities that are increased due to the trade are actually the reason for economic growth such as technological advancement, the establishment of institutions and improvement.Muritala [12] conducted a research and found that the two variables share a positive relationship, proved by stating that increase in investment leads to improvement in economic performance because when consumption will increase, so will the productivity and labour leading to increasing in output. Tridico [6] found that education level of a country or the institutions of the alone does not have a major effect on the growth of economy. Cooray [13] on the other hand deduced through the research carried out that enrolment of students in educational institutions at different levels does impact the

economic growth of a country.Considering these situations, this research paper will be looking at whether trade really does have an impact on the economic growth of selected emerging economies (China, India, Indonesia, Malaysia,, South Korea and Thailand). Hence, this research paper will be looking at whether the increase in trade activities (export and import) affects the economic growth and how. Furthermore, it will also be focusing on finding out whether certain selected factors that are presumed to affect the economic growth of the selected emerging economies really do affect or not. The selected factors include inflation, financial development (depicted by broad money) and manufacturing. Additionally, the paper will also be briefly discussing whether the effects on the economic growth due to the variables (trade, inflation, financial development and manufacturing) are positive or negative. The data collected in this research paper will be from the period of 1990 to 2014 and one of the core sources for the date presented in this research is from World Development Indicators (WDI). The increasing emphasis on trade and its growing importance of trade has been discussed by many researchers throughout the previous years. However, this paper aims to discuss the relationship of trade (via export and import values) with economic growth of emerging economies and the other factors affecting the economic growth by providing empirical evidence as this has not been done much by previous researchers especially for certain emerging economies selected in this paper. Moreover, such vital information can be utilised by the financial policy makers to improve the economic growth for their countries as they would be aware which area needs to be focused on to gain economic growth. Additionally, empirical evidence of such papers is necessary for academic purposes too, as such pieces of evidence lead to the establishment of theories.

METHODOLOGY

This research is quantitative research that used statistical analysis and models to interpret the secondary data that has been collected. This research aims to determine the relationship between trade and economic growth of the emerging economies (, China, India, Indonesia, Malaysia, , South Korea and Thailand). The study uses annual time-series data sets for the period 1990-2014. The main source of data used in this paper is World Development Indicators. The data used in the analysis is based on using the exports and imports as the indicators of the trade in addition to the control variables which are, investment, education, inflation, financial development and manufacturing. These data were used in the regression model to find out the relationship of each variable with GDP (an indicator of economic growth).

The Empirical Method

The empirical models used. The model had trade broken down into exports and imports variable, hence, the model used for regression was, $Y = c + Ex + Im + B + I + M$. In this model, Y = GDP annual growth (%), c = constant or the coefficient, Ex = Exports of goods and services (annual % growth), Im = Imports of goods and services (annual % growth), B = Broad Money growth (%), I = Inflation growth (%), M = Manufacturing growth (%).

Model Testing

The model for this research will be tested in regression analysis. Regression analysis is one of the most widely statistical tools as it assists in attesting the model as a fit or not. Additionally, it also is used as it can forecast the actual outcomes of the model in use. This analysis works by dividing the data matrices into X and Y variables to build up the fundamental equation Y= f(X). This model is then used to derive the advanced equation specific to the research as it helps in describing the relationship between the two variables where X is deemed as an independent variable and Y is the dependent variable.

Hypothesis and Significance Testing

Normally in such researches, the hypothesis testing is conducted by the use of the t-tests which is responsible for analysing the means of two variables that are statically considered to be different from each other. Commonly used when the variances of the variables are unknown and the sample size is considered to be small. This sort of statistical analysis is called t-statistics used to evaluate whether the mean of the two variables represents a real difference from the population of the sampling group. The significance of the results is verified by the use of pvalues. The p-value is to be compared to the significance level of 10% (= 0.1). If the p-value is less than 10% then it is accepted as a significant null otherwise it is considered to be insignificant and the null is rejected.

RESULT AND DISCUSSION

China

The regression model for china is shown in Table 2, trade is decomposed into exports and imports in order to examine their separate impact on economic growth. In this regard, the following model is estimated, GDP growth = constant + Exports Growth + Imports Growth+ Broad money growth + Inflation growth + Manufacturing growth GDP growth = -19.42 + 0.05 Exports Growth + 0.096 Imports Growth + 0.09 Broad money growth (0.14) (0.005)* (0.08)* + 0.14 Inflation growth + 0.53 Manufacturing growth (0.07)* (0.002)*.

Table 1. Results of Regression Analysis for China

	Coe	S.E	t-stat	p-value	Lower 95%	Upper 95%	Lower 95%	Upper 95%
Intercept	-	7.12	-	0.01	-	-	-	-

	19.425	7	2.726	3	34.341	4.509	34.341	4.509
Export (annual % growth)	0.049	0.032	1.537	0.141	-0.018	0.117	-0.018	0.117
Import (annual % growth)	0.096	0.031	3.139	0.005	0.032	0.160	0.032	0.160
Broad money (annual %)	0.093	0.050	1.846	0.081	-0.012	0.198	-0.012	0.198
Inflation, GDP deflator (annual %)	0.144	0.076	1.905	0.072	-0.014	0.302	-0.014	0.302
Manufacturing, value added (annual % growth)	0.538	0.156	3.456	0.003	0.212	0.864	0.212	0.864

Indonesia

The regression mode for Indonesia is shown in Table 2, trade is decomposed into exports and imports in order to examine their separate impact on economic growth. In this regard, the following model is estimated, GDP growth = constant + Exports Growth + Imports Growth+ Broad money growth + Inflation growth + Manufacturing growth GDP growth = 5.04 + 0.056 Exports Growth + 0.02 Imports Growth + 0.01 Broad money growth (0.29) (0.605) (0.79) - 0.19 Inflation growth + 0.31 Manufacturing growth (0.002)* (0.01)*.

Table 2. Results of Regression Analysis for Indonesia

	Coe	S.E	t-stat	p-value	Lower 95%	Upper 95%	Lower 95%	Upper 95%
Intercept	-19.425	7.127	-2.726	0.013	-34.341	-4.509	-34.341	-4.509
Export (annual % growth)	0.049	0.032	1.537	0.141	-0.018	0.117	-0.018	0.117
Import (annual % growth)	0.096	0.031	3.139	0.005	0.032	0.160	0.032	0.160
Broad money (annual %)	0.093	0.050	1.846	0.081	-0.012	0.198	-0.012	0.198

Inflation, GDP deflator (annual %)	0.144	0.076	1.905	0.072	-0.014	0.302	-0.014	0.302
Manufacturing, value added (annual % growth)	0.538	0.156	3.456	0.003	0.212	0.864	0.212	0.864

Malaysia

The regression mode for Malaysia is shown in Table 3, trade is decomposed into exports and imports in order to examine their separate impact on economic growth. In this regard, the following model is estimated, GDP growth = constant + Exports Growth + Imports Growth+ Broad money growth + Inflation growth + Manufacturing growth GDP growth = 2.57 - 0.16 Exports Growth + 0.20 Imports Growth + 0.05 Broad money growth (0.03)* (0.00)* (0.00)* - 0.02 Inflation growth + 0.34 Manufacturing growth (0.71) (0.00)*.

Table 3. Results of Regression Analysis for Malaysia

	Coe	S.E	t-stat	p-value	Lower 95%	Upper 95%	Lower 95%	Upper 95%
Intercept	2.571	0.414	6.208	0.000	1.704	3.438	1.704	3.438
Export (annual % growth)	-0.164	0.074	-2.207	0.040	-0.320	-0.008	-0.320	-0.008
Import (annual % growth)	0.203	0.059	3.454	0.003	0.080	0.326	0.080	0.326
Broad money (annual %)	0.053	0.014	3.642	0.002	0.022	0.083	0.022	0.083
Inflation, GDP deflator (annual %)	0.028	0.075	-0.375	0.712	-0.185	0.129	-0.185	0.129
Manufacturing, value added (annual % growth)	0.343	0.060	5.700	0.000	0.217	0.468	0.217	0.468

South Korea

The regression mode for South Korea is shown in Table 4, trade is decomposed into exports and imports in order to examine their separate impact on economic growth. In this regard, the following model is estimated, GDP growth = constant + Exports Growth + Imports Growth+ Broad money

growth + Inflation growth + Manufacturing growth GDP growth = 0.98 - 0.072 Exports Growth + 0.18 Imports Growth + 0.02 Broad money growth (0.10)* (0.027)* (0.19) + 0.31 Inflation growth + 0.27 Manufacturing growth (0.002)* (0.06)*

Table 4. Results of Regression Analysis for South Korea

	Coe	S.E	t-stat	p-value	Lower 95%	Upper 95%	Lower 95%	Upper 95%
Intercept	0.986	0.674	1.463	0.160	-0.425	2.397	-0.425	2.397
Export (annual % growth)	-0.073	0.042	-1.723	0.101	-0.161	0.016	-0.161	0.016
Import (annual % growth)	0.181	0.075	2.396	0.027	0.023	0.338	0.023	0.338
Broad money (annual %)	0.024	0.018	1.360	0.190	-0.013	0.061	-0.013	0.061
Inflation, GDP deflator (annual %)	0.315	0.090	3.480	0.003	0.126	0.504	0.126	0.504
Manufacturing, value added (annual % growth)	0.269	0.138	1.956	0.065	-0.019	0.558	-0.019	0.558

Thailand

The regression mode for Thailand is shown in Table 5, trade is decomposed into exports and imports in order to examine their separate impact on economic growth. In this regard, the following model is estimated, GDP growth = constant + Exports Growth + Imports Growth+ Broad money growth + Inflation growth + Manufacturing growth GDP growth = 1.75 - 0.19 Exports Growth + 0.15 Imports Growth - 0.006 Broad money growth (0.009)* (0.0007)* (0.92) + 0.08 Inflation growth + 0.51 Manufacturing growth (0.622) (0.000)*.

Table 5. Results of Regression Analysis for Thailand

	Coe	S.E	t-stat	p-value	Lower 95%	Upper 95%	Lower 95%	Upper 95%
Intercept	1.752	0.599	2.924	0.009	0.498	3.005	0.498	3.005
Export (annual % growth)	-0.196	0.068	-2.887	0.009	-0.338	-0.054	-0.338	-0.054

Import (annual % growth)	0.155	0.039	4.006	0.001	0.074	0.236	0.074	0.236
Broad money (annual %)	-0.006	0.065	-0.096	0.925	-0.143	0.130	-0.143	0.130
Inflation, GDP deflator (annual %)	0.085	0.169	0.502	0.622	-0.269	0.439	-0.269	0.439
Manufacturing, value added (annual % growth)	0.514	0.066	7.757	0.000	0.376	0.653	0.376	0.653

India

The regression mode for India is shown in Table 6, trade is decomposed into trade is decomposed into exports and imports in order to examine their separate impact on economic growth. In this regard, the following model is estimated, GDP growth = constant + Exports Growth + Imports Growth+ Broad money growth + Inflation growth + Manufacturing growth GDP growth = 4.965 - 0.029 Exports Growth + 0.024 Imports Growth + 0.051 Broad money growth (0.599) (0.59) (0.68) - 0.232 Inflation growth + 0.348 Manufacturing growth (0.096) (0.002)*

Table 6. Results of Regression Analysis for India

	Coe	S.E	t-stat	p-value	Lower 95%	Upper 95%	Lower 95%	Upper 95%
Intercept	4.965	2.068	2.401	0.027	0.637	9.293	0.637	9.293
Export (annual % growth)	-0.029	0.053	-0.535	0.599	-0.140	0.083	-0.140	0.083
Import (annual % growth)	0.024	0.043	0.548	0.590	-0.066	0.114	-0.066	0.114
Broad money (annual %)	0.051	0.121	0.419	0.680	-0.203	0.305	-0.203	0.305
Inflation, GDP deflator (annual %)	-0.232	0.133	-1.749	0.096	-0.510	0.046	-0.510	0.046
Manufacturing, value added (annual % growth)	0.348	0.095	3.674	0.002	0.150	0.546	0.150	0.546

Overall Discussion

The above results show that in some countries trade seems to be a factor of GDP while in other countries it isn't. In fact, countries that are ASEAN countries (China, Indonesia, South Korea & Thailand) have traded (in terms of exports & imports) as a significant factor while the South Asian countries show a similar result of not having trade as a significant factor. This trend is because the ASEAN countries are trade led countries and have established their trade system well to enhance their GDP (economic growth). These measures of boosting their economic growth through trade can be easily deduced by their many measures to have free trade and expansion of their trade system. On the other hand, the South Asian countries are manufacturing led countries hence, the results of these set of countries show manufacturing growth as a significant factor for economic growth. Another very interesting and surprising result obtained from the regression model is that of getting exports' coefficient as negative for many countries that have exports as a significant factor for economic growth. This means that when exports will increase, the economic growth will actually decrease instead of increasing as is the assumption in many cases. The cause of this unusual relationship has been explained by Rashid, Ullah & Zaman [14] who have concluded that when a country has instability in their exports system, it leads to a decrease in economic growth.Furthermore, the results also showcased that imports for countries, for who imports is a significant factor of economic growth and has a positive co-efficient. This means that the increase in imports will result in the increase in the GDP of the country. The cause of this relationship has been well explained by previous authors such as Lee [15], who stated that increase in importing of products or services that are either rare or add value to the production of the country will lead to the increase in the economic growth of the country. Moreover, most of the countries' results that had inflation as a significant factor showed an inverse relationship between inflation and economic growth. While the financial development (measured by broad money growth) has been significant only for Malaysia, showing that not a lot of countries selected in this paper are affected by the financial development.

CONCLUSION

This paper attempts to test the widely accepted notion that trade is a major factor for the economic growth and that by adopting various trade policies and increasing trade activities a country can boost their economic growth. This has especially been the focal point for many emerging economies. To test this hypothesis, the paper used regression analysis of the data that was collected from WDI (World Development Indicators) for selected emerging economies (China, India, Indonesia, Malaysia,South Korea & Thailand). The variables selected for this analysis includes GDP growth, Trade (% of GDP), Exports and Imports (decomposing trade to determine the effects of each variable on GDP), inflation, financial development (broad money growth) and manufacturing growth. The results were quite different from the hypothesis stated by any previously. The results led to the grouping of the countries into

the category of trade led and manufacturing led growth countries. The trade led countries (ASEAN countries) were found to have exports and imports to be significant in affecting the economic growth. While the manufacturing based countries were not significantly affected by changes in these variables instead their growth is affected by the manufacturing growth. Furthermore, for ASEAN countries it was found that growth in exports had an inverse relationship with GDP.

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