

## Comparing the long term growth-enhancing effect of RCEP and CPTPP: Evidence from Malaysia

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### ABSTRACT

By using a simple export-led growth model, this study compares the growth-enhancing effect of RCEP and CPTPP for the Malaysian economy. Based on data from November 2012 to August 2019, the results indicate that, first, total exports to member countries of RCEP is found to have a long-run relationship with Malaysia's Industrial Production Index (IPI). There is no cointegration relationship between IPI and total exports to member countries of CPTPP. Second, the growth-enhancing effect of RCEP is found to be greater than CPTPP. Third, the results obtained for RCEP are robust even with the exclusion of Malaysia's major trading partners in the RCEP agreement. Based on the findings, this study offers some policy recommendations.

### ملخص

تقارن هذه الدراسة، باستخدام نموذج بسيط للنمو القائم على التصدير، الأثر المعزز للنمو الذي تحدثه الشراكة الاقتصادية الإقليمية الشاملة (RCEP) واتفاق الشراكة الشاملة والتقدمية عبر المحيط الهادئ (CPTPP) بالنسبة للاقتصاد الماليزي. واستنادا إلى البيانات المستمدة عن الفترة ما بين نوفمبر 2012 و أغسطس 2019، تشير النتائج إلى: أولا، لدى إجمالي الصادرات إلى البلدان الأعضاء في الشراكة الاقتصادية الإقليمية الشاملة علاقة طويلة الأمد بمؤشر الإنتاج الصناعي في ماليزيا. ولا توجد علاقة اندماج مشترك بين مؤشر الإنتاج الصناعي ومجموع الصادرات إلى البلدان الأعضاء في اتفاق الشراكة الشاملة والتقدمية عبر المحيط الهادئ. وثانيا، يتبين أن الأثر المعزز للنمو الذي تخلفه الشراكة الاقتصادية الإقليمية الشاملة أكبر من اتفاق الشراكة الشاملة والتقدمية عبر المحيط الهادئ. وثالثا، إن النتائج التي تم التوصل إليها بالنسبة للشراكة الاقتصادية الإقليمية الشاملة قوية حتى مع استبعاد الشركاء التجاريين الرئيسيين لماليزيا في اتفاق هذه الشراكة. واستنادا إلى النتائج، تقدم هذه الدراسة بعض التوصيات المتعلقة بالسياسة العامة.

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### ABSTRAITE

En utilisant un modèle simple de croissance tirée par les exportations, cette étude compare l'effet de renforcement de la croissance du RCEP et du CPTPP pour l'économie malaisienne. Sur la base de données allant de novembre 2012 à août 2019, les résultats indiquent que, premièrement, les exportations totales vers les pays membres du RCEP ont une relation à long terme avec l'indice de production industrielle (IPI) de la Malaisie. Il n'y a pas de relation de cointégration entre l'IPI et les exportations totales vers les pays membres du CPTPP. Deuxièmement, l'effet de renforcement de la croissance du RCEP est plus important que celui du CPTPP. Troisièmement, les résultats obtenus pour le RCEP sont robustes même avec l'exclusion des principaux partenaires commerciaux de la Malaisie dans l'accord RCEP. Sur la base de ces résultats, cette étude propose quelques recommandations politiques.

**Keywords:** Comprehensive Economic Partnership (RCEP), Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), export-led growth model, growth-enhancing effect, cointegration relationship, Malaysia

#### 1. JEL Classification: F02, F13, F14, F15, F41 Introduction

The Malaysian government was initially keen on signing both the TPP and the RCEP. It is argued that Malaysia would be able to experience more trade and investment by signing both trade agreements. It was also thought that engagement with both FTAs would allow the country to be the trade and investment hub for ASEAN. This was an attractive proposition given the size of the ASEAN market which has a population of 622 million and member countries with high growth rates.

The theoretical argument between trade and economic growth can be traced back to the theory of comparative advantage by Ricardo (1817), whereby both trading countries would result in welfare gain if they specialize on their comparative advantage goods. Subsequently, the factor endowment trade theory (Heckscher, 1919; Ohlin, 1933; Stolper and Samuelson, 1941) argued that difference in factor endowment is the main cause of trade, whereby countries would gain from trade if they specializes on the production of goods and services which its abundant factor is intensively used. Apart from the conventional trade theory, the new trade theory argues that trade fosters economic growth through the creation of innovation and knowledge spillovers in different countries. In particular, international trade provides greater access to a large international market, advanced technology, and a larger stock of

knowledge. This in turn facilitates knowledge transfer between countries, leading to more innovation and fosters economic growth (Grossman and Helpman, 1989, 1990, 1991 and Krugman, 1990). Thus, the new trade theory postulated that country with higher degree of trade openness would have greater technological spillovers, and therefore experience faster growth than country with lower degree of trade openness. Taken together, all the above theoretical justifications posit that international trade is beneficial for country's economic growth.

The TPP was viewed as useful to Malaysia because Malaysia's trade with USA was declining in importance. The TPP was seen as a way of gaining access to the US market. Historically, Malaysia had initiated the US-Malaysia FTA in 2005 but it was never completed. The TPP was, therefore, a chance for Malaysia to conclude an agreement with US, although it was not a bilateral agreement. However, US withdrew from the TPP, resulting in the re-designation of the agreement as the CPTPP. With the new CPTPP, Malaysia is still undecided as to whether it would be beneficial to be a part of the arrangement. Hence, Malaysia has not ratified the agreement yet. There are two issues on which Malaysia has concerns regarding the CPTPP. First, the government is undecided as to whether the gains from the FTA are worthwhile given the high quality of the agreement. Second, government procurement, intellectual property rights and ISDS are aspects of the agreement that the present government finds unfavourable. Thus, there is some reluctance to ratify the CPTPP.

The other mega FTA that Malaysia has an interest in is RCEP, with its membership of ASEAN countries and its trading partners. The advantage of RCEP is that it retains ASEAN centrality while also engaging three globally powerful economies, that is, China, India and Japan. Notably, RCEP has been officially signed in November 2020 but with the exclusion of India from the agreement. The RCEP marks ASEAN's biggest free trade pact to date, covering a market of 2.2 billion people with a combined size of US\$26.2 trillion or 30% of the world's GDP (ASEAN Secretariat News, 2020). Given the important role played by the two trade agreements, it is interesting to examine which agreement is beneficial to the Malaysia's economic performance.

Empirical research has examined the economic impact of CPTPP and RCEP. For CPTPP, Dasgupta and Mukhopadhyay (2017) found that with the US in the TPP, all the ASEAN countries in the TPP will enjoy welfare

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gains and positive growth in output and trade. Again, the results show that Vietnam and Malaysia will gain the most. However, a TPP without US, which is known as CPTPP, still promises positive growth rates but there is a considerable reduction in welfare, output and export growth for the ASEAN members as compared to a TPP with the US. Furthermore, Vietnam and Malaysia according to their results are most affected by the withdrawal of US. Similarly, the grow-enhancing effect of CPTPP is consistent with the latter study by Khan et al (2018); Li and Whalley (2020); Li et al (2020). However, study by Banga (2019) models the implications of Malaysia joining the CPTPP using SMART simulations. Results indicate that exports will not rise much because Malaysia already has free trade agreements with Japan, Singapore and Australia. Malaysia's exports to these countries account for 84 per cent of exports to CPTPP members.

For RCEP, simulations generated by Guo and Li (2019) lead them to conclude that China will enjoy welfare gains from all the FTAs that are considered, and that includes the China-Japan-Korea, China-Asean, China-Gulf Cooperation Council FTAs and the FTAAP and RCEP. Results indicate that RCEP is expected to yield the highest welfare gain for China. In a related study, Li and Moon (2018) examine the effects of RCEP on trade and income in China and Korea. According to their model with RCEP, both Korea and China's total trade will increase, and so will income.

Next, in comparing the welfare and sectoral effect between CPTPP and RCEP, Lee and Itakura (2018) found that ASEAN countries are likely to enjoy greater welfare gains from RCEP than CPTPP. In any case, the study found that the textiles and apparel and electronic sectors stand to benefit from these scenarios. However, recent study by Itakura and Lee (2019) found that both CPTPP and RCEP are equally important for ASEAN countries and the rest of the world, whereby there is no substantial different in the welfare and output gain from the two trade agreements. In contrast, study by Petri and Plummer (2020) found that RCEP has a greater output-enhancing effect as compared to CPTPP. In the presence of US-China trade war, RCEP and CPTPP would raise global income by USD 209 billion and USD 121 billion annually by 2030, respectively. Moreover, the study estimated that China, Japan and South Korea would yield the largest benefits from the two trade agreements.

The mix findings mentioned above motivate this study to re-examine the economic impact of CPTPP and RCEP. In particular, this study compares the growth-enhancing effect of CPTPP and RCEP on the Malaysian economy. Malaysia is an interesting case for analysis for three reasons. First, Malaysia is one of the few countries in ASEAN that is contemplating both the CPTPP and RCEP. While Malaysia is a member of ASEAN and therefore values RCEP, Malaysia also wants to gain from the CPTPP. Second, the previous government under Najib Razak was certain that Malaysia would gain by participating in both agreements. The present government is undecided. Hence it has not ratified the CPTPP. Third, Malaysia perceived CPTPP and RCEP as being complementary. Thus, there would be additional benefits from being in the CPTPP, that is, further to RCEP. Given these reasons, it is useful to determine the bottom-line for Malaysia. The analysis we are undertaking will explain what is the least that Malaysia can do. Also, it will give an idea if the gains from the CPTPP are too considerable to be foregone.

As we can see, Malaysia has two FTAs that it can consider: CPTPP and RCEP. The question with regard to CPTPP is whether or not it will be beneficial to Malaysia, since US is out of the deal. As for RCEP, for the moment India is out of the FTA. Thus, it is necessary to assess which of the following FTAs are most favourable to Malaysia: CPTPP or RCEP without India. This will help us to determine whether the most important trade variable for Malaysia is USA, India or ASEAN.

This study differs from the previous literature in three ways. First, unlike previous literature which examines the aggregate economic impact of free trade agreements, this study examines in detail how the export to member countries of a free trade agreement would benefit the Malaysia economy. This study uses a simple export-led growth model to quantify the economic effect of CPTPP and RCEP on the Malaysian economy. This is justifiable on the basis that one of the objectives of free trade agreements is to lower tariff and facilitate trade among member countries. Ultimately, greater export would translate into higher economic growth for member countries. Hence, the use of export-led growth model is appropriate in explaining the economic gains obtained from free trade agreement, particularly from the export of goods and services to member countries.

Second, the long-run relationship between Malaysia's economic growth and export to member countries of CPTPP and RCEP is not well

established in the existing literature. In this regard, this study examines the existence of a cointegration relationship between export to member countries of CPTPP and RCEP with Malaysia's economic growth. This is important as it would identify which free trade agreement is the source of long term growth for Malaysia. Third, this paper differs from the existing studies by providing various scenarios on the withdrawal of member countries from both trade agreements. This would provide insight on which agreement is beneficial to Malaysia despite the withdrawal of member countries.

Based on the Non-linear Autoregressive Distributed Lag (NARDL) model proposed by Shin et al (2014), the empirical results demonstrate that: First, there exists a long-run relationship between Malaysia's Industrial Production Index (IPI) and the total export to member countries of RCEP, while there is no cointegration relationship between IPI and total export to member countries of CPTPP. Second, the growth-enhancing effect of RCEP is found to be greater than CPTPP. Third, the results obtained for RCEP are robust even with the exclusion of Malaysia's major trading partners, namely Singapore, China and Japan in the RCEP agreement.

In line with the empirical results, this study contributes to the debate on which FTAs are most favourable to Malaysia: CPTPP (i.e TPP without the US) or RCEP without India. Taken together, it can be argued that RCEP is imperative in facilitating the long-term economic growth in Malaysia, despite the withdrawal of India from the agreement. As such, there exists a long-run relationship between IPI and the total export to member countries of RCEP. This implies that export to member countries of RCEP would have a significant impact on the economic performance of Malaysia in the long-run. In particular, the result shows that an increase in the total exports to member countries of RCEP would lead to an expansion in the economic growth in the long-run, which is consistent with the export-led growth hypothesis. However, the reduction in total export to member countries of RCEP is found to have no impact on the Malaysia's economic performance and this is consistent with the export geographical diversification argument, in which the negative impact is offset by the increase in export to other trading partners.

This paper unfolds as follow. Section 2 provides the export-led growth model. Section 3 illustrates the data and methodology used in this study.

Section 4 presents estimation results. Section 5 provides the discussion for the results and policy recommendations. Section 6 sets forth conclusions.

## 2. Empirical Model

This study uses a simple export-led growth model for quantifying the growth-enhancing effect of CPTPP and RCEP on the Malaysian economy. The empirical model is as follows:

$$\ln IPI_t = \beta_0 + \beta_1 \ln Export_t + \varepsilon_t \quad (1)$$

Since monthly data on real GDP is not available, the Industrial production index (*IPI*) is used as a measure of real output. This is justifiable on the basis that the industrial production index is included as a coincident indicator for Malaysia's real activity (Ibrahim and Sufian 2014). Next, *Export* is a vector of total export of goods and services to member countries of RCEP and CPTPP. One of the objectives of free trade agreements (RCEP and CPTPP) is to facilitate the flow of goods and services among the member countries, therefore this study uses the total export to member countries of RCEP and CPTPP as a proxy to measure the economic impact of the two agreements. This is justifiable on the basis that exports are one of the major determinants of economic growth in Malaysia. Based on the data from World Bank, total export constitutes 68.76 percent of Malaysia GDP in 2018. Given this substantial amount of exports, it is interesting to examine whether the export to the member countries of CPTPP and RCEP would benefit the Malaysia economic growth. Next, *Ln* denotes the natural logarithm and  $\varepsilon_t$  is the error term.

Given that the objective of this study is to compare the impact of RCEP and CPTPP on Malaysia's economic growth, two assumptions are required to make on the empirical implementation of equation (1). As such:

Assumption 1: Both RCEP and CPTPP enter into force in November 2012.

Assumption 2: All member countries of RCEP and CPTPP agree to join the agreement in November 2012.

Given the latest development in both free trade agreements, India and United States will not be included into the member countries of RCEP and CPTPP, respectively. This study assumes that both agreements enter into force in November 2012. By doing so, a fair comparison on the impact of RCEP and CPTPP on Malaysia economic performance can be made. Moreover, this study selects the launch of RCEP negotiation (November 2012) as the starting period in order to have a sufficient sample size for the subsequent analysis. If the starting period is based on the time period where member countries agreed to conclude CPTPP (January 2018) or the time period where RCEP was officially signed (November 2020), the model will be estimated with lesser degree of freedoms (too many parameters in the model) and the analysis will be invalid. Despite using historical data in quantifying the economic impact of RCEP and CPTPP, the use of econometric method in this study would trace the impact of RCEP and CPTPP on Malaysia economic performance in the long-term period. This is important as it may provide direction to the Malaysia authority on which trade agreement is the source for long-term economic growth.

Next, assumption 2 is made in order to assess the full impact of the trade agreements on Malaysia's economic growth. However, this assumption will be relaxed in the subsequent analysis. This is because one may argue that RCEP would be beneficial to Malaysia's economic performance as compared to CPTPP due to the inclusion of major trading partners as the member countries of RCEP. To answer this, the top five trading partners of Malaysia which are also the member countries of RCEP will be removed from the model hypothetically. Subsequently, this would provide an answer whether the impact of RCEP on Malaysia economic performance is subjected to the inclusion of major trading partners.

### **3. Data and Methodology**

#### **3.1. Data**

This study employs monthly data from November 2012 to August 2019. Table 1 shows the member countries of RCEP and CPTPP. Table 2 shows the list of variables used in this study. By following assumption 2 above, RCEP1 and CPTPP are used to access the impact of the two trade agreements on economic growth. Furthermore, RCEP2 to RCEP5 are used to capture the impact of RCEP on Malaysia economic performance

with the exclusion of major trading partners<sup>1</sup>. For example, the construction of RCEP2 is arrived at by removing the total export to Singapore from the total export to member countries of RCEP.

**Table 1:** Member countries

<b>Panel A: RCEP</b>			
10 ASEAN countries			Six FTA partners
Brunei	Myanmar		China
Cambodia	Philippines		Japan
Indonesia	Singapore	+	India
Laos	Thailand		South Korea
Malaysia	Vietnam		Australia
			New Zealand
<b>Panel B: CPTPP</b>			
Australia	Malaysia	Vietnam	Brunei
Mexico	Canada	New Zealand	Chile
Peru	Japan	Singapore	

**Table 2:** List of variable

Variable	Description
IPI	Industrial production index
RCEP1	Total export to member countries of RCEP excluding India
RCEP2	Total export to member countries of RCEP excluding India and Singapore
RCEP3	Total export to member countries of RCEP excluding India and China
RCEP4	Total export to member countries of RCEP excluding India and Japan
RCEP5	Total export to member countries of RCEP excluding India, Singapore, China and Japan
CPTPP	Total export to member countries of CPTPP excluding United States

Notes: Sample period: November 2012 to August 2019.

IPI is measured in index. The total export is measured in MYR million.

Total export refers to the total export of goods and services.

All the data are retrieved from Department of Statistics Malaysia.

### 3.2. Methodology

The Nonlinear Autoregressive Distributed Lag (NARDL) model developed by Shin et al (2014) is used to estimate equation (1) above. The NARDL model is used to examine the asymmetrical relationship between

<sup>1</sup> The list of Malaysia's top trading partner in 2018 can be found in <http://www.worldstopexports.com/malaysias-top-import-partners/>. However, Hong Kong and United States are not member countries of RCEP, and therefore they are not included in this study.

export and economic growth, in which economic growth may respond differently with respect to the increase and decrease in the total export.

The increase in export would improve the economic growth as indicated by the export-led growth hypothesis (McKinnon 1964; Balassa 1978; Sheehey 1990; Buffie 1992). As noted by Awokuse (2003), export expansion would serve as a catalyst for output growth both directly and indirectly. The former is due to the component of aggregate output, and therefore export growth will contribute directly to the growth in output level. The latter is due to foreign market competition, which leads to a greater capacity utilization, exploitation of economies of scale and improvement of technology level in the domestic economy. Subsequently, this improves domestic investment, thereby generating output growth.

Conversely, the decrease in export may have no impact on economic growth with the condition that country practices export geographical diversification. Generally, the practice of diversifying export portfolios into different sets of markets in the world allows developing countries to access a more stable revenue stream than of concentrating in just a few markets (Hinlo and Aranguez 2017). As noted by Shepherd (2009), demand shocks tend to be correlated across sectors and countries, therefore well-diversified economies would have a better scope in offsetting income losses caused by the drop in external demand from a group of trading partners. Accordingly, diversification of exports geographically would reduce export instability by reducing the dependence on a limited number of market destinations. Consequently, this would stabilize the domestic economic growth in the event of negative external demand shocks. Hence, it can be argued that there appears to be an asymmetrical relationship between export and economic growth. Therefore, the use of NARDL is appropriate in the context of this study to capture the asymmetry in response of economic growth toward the changes in total export.

Moreover, the used of NARDL allows this study to trace the long-run effect of the two trade agreements on Malaysian economic performance. This is imperative as it provides suggestions to the Malaysian authorities on which free trade agreement will be the engine of growth in the long-run. Therefore, the linear model in equation (1) can be re-written as follows:

$$\text{LnIPI}_t = \beta_0 + \beta_1 \text{LnExport}_t^+ + \beta_2 \text{LnExport}_t^- + \varepsilon_t \quad (2)$$

where  $\text{LnExport}_t^+$  and  $\text{LnExport}_t^-$  are partial sums of positive and negative changes in total export to member countries of RCEP and CPTPP:

$$\text{LnExport}_t^+ = \sum_{i=1}^t \Delta \text{LnExport}_i^+ = \sum_{i=1}^t \max(\Delta \text{LnExport}_i, 0) \quad (3)$$

and

$$\text{LnExport}_t^- = \sum_{i=1}^t \Delta \text{LnExport}_i^- = \sum_{i=1}^t \max(\Delta \text{LnExport}_i, 0) \quad (4)$$

The long-run relationship between economic growth and total export is  $\beta_1$  and  $\beta_2$  indicating respectively the increase and decrease in the exports. In the empirical implementation, the long-run equation (2) can be framed in an ARDL setting as in Shin et al (2014). That is:

$$\begin{aligned} \Delta \text{LnIPI}_t = & \theta_0 + \theta_1 \text{LnIPI}_{t-1} + \theta_2 \text{LnExport}_{t-1}^+ \\ & + \theta_3 \text{LnExport}_{t-1}^- + \sum_{i=1}^p \gamma_{1i} \Delta \text{LnIPI}_{t-1} \\ & + \sum_{i=0}^q \gamma_{2i}^+ \Delta \text{LnExport}_{t-i}^+ + \sum_{i=0}^q \gamma_{3i}^- \Delta \text{LnExport}_{t-i}^- + \varepsilon_t \end{aligned} \quad (5)$$

where all variables are as defined above and  $p$  and  $q$  are lag orders. Given monthly data, this study sets the maximum ARDL lag order to 12 as in Sukmana and Ibrahim (2017). In conducting the NARDL estimation, this study follows the steps as in Katrakidilis and Trachanas (2012), Fousekis et al, (2016) and Sukmana and Ibrahim (2017). First, equation (5) is estimated by using the OLS. To arrive at the final specification, this study applies the general-to-specific approach to sequentially remove the insignificant lags from the model. Second, the ARDL cointegration test will be conducted to check for the presence of long-run relationship between the two variables. This involves the Wald F test of the null hypothesis  $\theta_1 = \theta_2 = \theta_3 = 0$  (Pesaran, Shin and Smith 2001) or the t-test of the null hypothesis that  $\theta_1 = 0$  (Banerjee, Dolado and Mestre 1998). Third, after identifying the presence of long-run relationship, this study proceeds to test for both the long-run and short-run asymmetries. The null hypothesis for the long-run asymmetry is  $-\theta_2/\theta_1 = -\theta_3/\theta_1$ . While the null hypothesis for the short-run asymmetry is

$$\sum_{i=0}^q \gamma_{2i}^+ = \sum_{i=0}^q \gamma_{3i}^- \quad (6)$$

## 4. Empirical results

### 4.1. Descriptive statistics

Based on Table 3, on average, total export to member countries of RCEP (except RCEP5) is higher than total export to member countries of CPTPP. Similarly, the total export to member countries of RCEP (RCEP1 to RCEP4) appear to be highly volatile relative to CPTPP, as shown by higher standard deviation. All series are transformed into natural logarithm for the subsequent analysis.

**Table 3:** Descriptive statistics

Variables	Mean	Standard deviation	Maximum	Minimum
IPI	103.451	7.455	116.200	90.500
RCEP1	40585.480	5293.410	56342.420	31763.940
RCEP2	30697.570	3975.045	42969.860	23938.600
RCEP3	30334.500	3582.074	41225.610	25554.300
RCEP4	34485.980	5379.657	49729.500	24707.600
RCEP5	15347.110	2226.733	21240.120	11093.350
CPTPP	21865.148	2486.899	28898.962	17586.924

Notes: All the series above are based on original data values.

### 4.2. NARDL results

Unit root tests have been conducted. Notably, all the three tests (ADF, PP and KPSS) show consistent results in which none of the variables are integrated in order two  $I(2)$ , and therefore the ARDL bound test can be used to test for cointegration of the variables. The results are not reported here to conserve space but they are available upon request.

Table 4 shows the ARDL cointegration test. As observed, total export to member countries of RCEP is found to be cointegrated with IPI, even with the exclusion of Malaysia's major trading partners (Equation 1 to 5). However, no cointegration relationship can be found between IPI and total export to member countries of CPTPP (Equation 6). The results suggest that the total export to member countries of RCEP is imperative in affecting the Malaysia long-term economic performance. In other word, the cointegration test results inform that RCEP is the source of long-term economic growth for Malaysia as compared to CPTPP.

**Table 4:** ARDL cointegration test. Dependent variable: LnIPI

Equation	Export variable	Banerjee t-statistic	Pesaran Bound test	Critical value (5%)	
1	LnRCEP1	-4.945**	8.215**	Lower	Upper
2	LnRCEP2	-4.664**	7.543**	<i>Banerjee t-statistic</i>	
3	LnRCEP3	-4.962**	8.325**	-2.86	-3.22
4	LnRCEP4	-4.810**	7.811**	<i>Pesaran Bound test</i>	
5	LnRCEP5	-5.235**	9.465**	4.94	5.73
6	LnCPTPP	-2.526	2.181		

Notes: Critical values are from Pesaran et al (2001). \*\* denotes significant at 5% level.

Table 5 presents the NARDL results. The long-run coefficient, short-and long-run asymmetry tests are reported at the bottom of the table. By looking at RCEP, it can be observed that the Wald F test statistics for the null hypothesis of long-run asymmetry is significant at 1 percent level in all cases. The null hypothesis of short-run asymmetry is rejected only in RCEP1, RCEP3 and RCEP4. Given the focus of this study is to examine which agreement is the source of long-term economic growth for Malaysia, the subsequent explanation will focus on the long-run effect of RCEP and CPTPP.

Focusing on the total export to member countries of RCEP with the exclusion of India (RCEP1), the long-run coefficients of the total export increase and the total export decrease to be respectively 0.082 and 0.002. The former is significant at 1 percent level while the latter is found to be insignificant. This means that the increase in total export to member countries of RCEP1 by 1 percent is related to an expansion in Malaysia IPI by 0.082 percent. This finding is consistent with the export-led growth hypothesis as mentioned above, in which export expansion would contribute to higher economic growth. Meanwhile, the decrease in total export to member countries of RCEP1 is found to have no impact on Malaysia's economic performance. The result is consistent with the above-mentioned argument, in which the practice of export geographical diversification would offset the income losses caused by the drop in external demand from a group of trading partners. The results documented for RCEP2 to RCEP 5 remain similar.

A similar conclusion can be obtained for CPTPP, in which there exists long-run asymmetry relationship between IPI and total export to member

countries of CPTPP. As such, the increase in total export is found to have an expansionary effect on IPI, while the decrease in total export is found to have an insignificant influence on IPI.

The above findings are particularly true in the context of Malaysia. As such, being an export-oriented economy, the export sector plays an important role in affecting the country's economic performance. Therefore, by engaging in free trade agreements, the export sector can be expanded in the context of increasing export destinations. Subsequently, this would boost the country's total exports, thereby contributing to economic growth. Besides entering into the RCEP or CPTPP, Malaysia also has trade agreements with other countries in the world<sup>1</sup>. Therefore, the reduction in the export to member countries of RCEP or CPTPP would have no impact on domestic economic performance as the negative effect may be offset by the increase in export to other trading partners.

We now turn to the main focus of this study, that is, to compare the effect of RCEP and CPTPP on Malaysia's economic growth. We focus on RCEP1 and CPTPP (Equation 1 and 6 in Table 5), where India and United States have been removed from the two agreement respectively. The long-run coefficients show that the growth-enhancing effect of total export to member countries of RCEP1 is higher than the total export to member countries of CPTPP (0.082 versus 0.074). Moreover, the former has a stronger influence on Malaysia's IPI as the relationship is significant at 1 percent level. While the latter is only significant at 10 percent level. This indicates that RCEP is the source of long-term economic growth for Malaysia, despite the withdrawal of India from the agreement.

To ensure the robustness of the relationship between IPI and total export to member countries of RCEP, this study removes assumption 2 above by assuming that Malaysia's major trading partners withdraw from the RCEP agreement. Notably, the role of RCEP in affecting Malaysia's long-term economic growth remains robust even with the removal of Malaysia's major trading partners (Equation 2 to Equation 5 in Table 5). As such, total export to member countries of RCEP with the exclusion of Singapore (Equation 2), China (Equation 3) and Japan (Equation 4) is found to have a long-run and positive relationship with Malaysia IPI. Next, Equation 5

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<sup>1</sup> The detail information on how many trade agreements has Malaysia involved in is available in <https://www.export.gov/article?id=Malaysia-Trade-Agreements>

provides an extreme scenario whereby Singapore, China and Japan are excluded from the RCEP. Despite this, RCEP remains favourable to the Malaysia economic growth. All the equations pass the diagnostic checks of no serial autocorrelation and normality test.

Taken together, it can be argued that RCEP is imperative in facilitating the long-term economic growth in Malaysia, despite the withdrawal of India from the agreement. As such, there exists a long-run relationship between IPI and the total export to member countries of RCEP as opposed to the relationship between IPI and total export to member countries of CPTPP, in which no long-run relationship can be found. This implies that export to member countries of RCEP would have a significant impact on the economic performance of Malaysia in the long-run.

In particular, the results shows that an increase in the total export to member countries of RCEP would lead to an expansion in the economic growth in the long-run, which is consistent with the export-led growth hypothesis. While, the reduction in total export to member countries of RCEP is found to have no impact on the Malaysia economic performance and this is consistent with export geographical diversification argument, in which the negative impact is offset by the increase in export to other trading partners. In addition, the growth-enhancing effect of total export to member countries of RCEP is higher than the total export to member countries of CPTPP. Furthermore, the positive impact of RCEP on Malaysia's economic performance is robust even with the absence of Malaysia's major trading partners in the RCEP agreement. Thus, RCEP is the source of long-term economic growth for Malaysia's economy. Notably, the results obtained concur with earlier studies by Lee and Itakura (2018) and Li and Moon (2018), whereby RCEP is found to benefit ASEAN countries as compared to CPTPP.

**Table 5:** NARDL estimation results. Dependent variable: LnIPI

Trade agreement Equations Variable	RCEP					CPTPP
	(1) RCEP1	(2) RCEP2	(3) RCEP3	(4) RCEP4	(5) RCEP5	(6) CPTPP
Constant	2.258***	2.209***	2.312***	2.166***	2.537***	1.519**
LnIPI <sub>t-1</sub>	-0.497***	-0.487***	-0.509***	-0.477***	-0.559***	-0.334**
LnExport <sub>t-1</sub> <sup>+</sup>	0.041**	0.025*	0.051***	0.035**	0.027**	0.025
LnExport <sub>t-1</sub> <sup>-</sup>	0.001	-0.013	0.012	0.001	-0.009	0.001
ΔLnIPI <sub>t-1</sub>						-0.334**
ΔLnIPI <sub>t-2</sub>						-0.237*
ΔLnIPI <sub>t-9</sub>				0.192**	0.221**	
ΔLnIPI <sub>t-12</sub>						-0.188**
ΔLnExport <sub>t</sub> <sup>-</sup>	0.068***		0.077***	0.054**		
ΔLnExport <sub>t-2</sub> <sup>-</sup>						
ΔLnExport <sub>t-6</sub> <sup>-</sup>						
<b>Long-run asymmetry</b>						
LnExport <sub>t</sub> <sup>+</sup>	0.082***	0.051*	0.099***	0.075***	0.048**	0.074*
LnExport <sub>t</sub> <sup>-</sup>	0.002	0.027	0.025	0.001	0.017	0.002
W <sub>LR</sub>	257.9***	281.1***	301.4***	182.8***	325.8***	131.6***
<b>Short-run asymmetry</b>						
W <sub>SR</sub>	7.90***		9.678***	5.591**		
<b>Diagnostic checks</b>						
Portmanteau test	0.177	0.031**	0.202	0.427	0.204	0.105
Jarque-Bera test	0.585	0.264	0.562	0.917	0.523	0.241

Notes: \*, \*\* and \*\*\* denotes significance at 10%, 5% and 1% respectively. WLR and WSR stand for Wald test for long-run asymmetry and short-run asymmetry respectively. P-value is reported for portmanteau and Jarque-bera test

## 5. Discussion

The RCEP is of value to ASEAN because it addresses concerns about the “noodle bowl” effect (Baldwin, 2007; Chaise and Hamanaka, 2018). ASEAN is an economically vibrant region, and its trade and investment potential can be further improved through the RCEP since it will overcome any existing restrictions that hinder economic cooperation with its main economic partners. Two outstanding issues that will be resolved through this arrangement are non-tariff barriers and rules of origin. As it stands, companies have to deal with the complexities of multiple rules of origin as are associated with the different trade agreements that prevail. The RCEP offers the promise of a standard set of rules. ASEAN member states, generally, have very low tariff rates, with Malaysia having rates that are as close to zero as possible for most tariff lines. Thus, lowering tariff rates will not deliver any additional gains. The next course of action will, therefore, be to attend to the non-tariff barriers, a matter that RCEP would be expected to address.

As a consequence of the RCEP, it can be expected that there will be smoother integration of global value chains (Athukorala, 2016). ASEAN member states are active participants in GVC networks. This is particularly true for Malaysia, Indonesia, Thailand and Vietnam. Multinational corporations are able to take advantage of GVCs and they have the resources to deal with the distinct requirements of the different trade arrangements. This is not the case with the small and medium enterprises (SMEs) which can find an important role to play within the RCEP arrangement (Chaise and Pomfret, 2019). Small and Medium Enterprises (SMEs) play a prominent role in the economic activity of Malaysia, since about 98 per cent of business establishments are SMEs. It stands to reason that RCEP will favour the SMEs, leading them to increase their contribution of value-added to the national economy.

In view of the advantages that the RCEP can possibly offer by way of the facilitation of trade and investment, Malaysia should position itself favourably. In policy terms, this has several implications. First, the government can attempt to take advantage of Malaysia’s level of development, areas of competitive advantage and geographical position to gain from membership in RCEP. Malaysia can position itself as the ‘hub’ of ASEAN, since in this manner it will be possible to take advantage of the gains from trade and investment arising out of RCEP. Second,

Malaysia should further develop the SME sector as this will enable the companies in the sector to be a part of the supply chain networks. Specifically, SMEs will be better able to integrate themselves in GVCS if they have adequate technological upgrading and technically skilled workers.

Policy makers in Malaysia should also consider how they can take advantage of the country's trade and investment connections with its traditional trade partners such as Japan, China and South Korea, while also improving intra-ASEAN links. As far as investment is concerned, it is important for Malaysia to have a set of more competitive investment policies and incentives given the increased competition for investment. This will be necessary if Malaysia is to be converted into a hub for investment in ASEAN, so as to take advantage of RCEP in attracting investments.

There will, of course, be concern that with RCEP, ASEAN would lose its centrality since China is a member of the trade arrangement. The reason for this fear is because China is the most powerful member of RCEP and there is concern that China's presence could dilute ASEAN centrality. However, this might be ill-founded because RCEP is based on the agreement, at the core of which are the ASEAN member states, without whose approval China will not be able to pursue its independent agenda.

Further, RCEP could be the first step towards deeper regional integration in so far as it heads towards Free Trade Area of the Asia Pacific (FTAAP). The idea of moving towards FTAAP has been mooted by FTAAP and by APEC, too. In the light of these aspirations, RCEP is a positive step in that direction. As far as Malaysia is concerned, if it is able to position itself and implement effective policies to attract investment and facilitate trade it will take advantage of RCEP and prepare itself for the deeper integration that will follow.

## **6. Conclusion**

This study compares the growth-enhancing effect of the RCEP and CPTPP agreements for Malaysia's economy. Based on data from November 2012 to August 2019, the NARDL results indicate that: First, total export to member countries of RCEP is found to have a long-run relationship with Malaysia's Industrial Production Index (IPI). However,

there is no cointegration relationship between IPI and total export to member countries of CPTPP. Second, the growth-enhancing effect of RCEP is found to be greater than CPTPP. Third, the results obtained for RCEP are robust even with the absence of Malaysia's major trading partners in the RCEP agreement.

The results have important implications as to which FTAs Malaysia should participate in. Based on the results, RCEP is found to play an important role in facilitating Malaysia's long-term economic growth as opposed to CPTPP. This is reasonable because the advantage of RCEP over CPTPP is that it retains ASEAN centrality. This is expected to improve further the flow of goods and services among countries, thereby achieving higher economic growth among the member countries of RCEP.

#### ***Acknowledgements***

*We would like to thank anonymous referee for helpful comments. The usual disclaimer applies.*

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