RESEARCH ON FACTORS AFFECTING VIETNAM'S TRADE BALANCE WITH RCEP COUNTRIES

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ABSTRACT

The study assesses the impact of macro factors on Vietnam's trade balance with RCEP countries using data from 2002 to 2021. The results show tariff reduction, trade opening, gross domestic product and foreign direct investment capital of RCEP countries have a positive impact on Vietnam's trade balance with these countries in the long run. Besides, in the short term, the foreign currency exchange rate against USD, geographical distance, and economic disparity are certain barriers to the improvement of Vietnam's trade balance with RCEP countries. On the basis of those research results, the article also proposes a number of policies to improve Vietnam's trade balance with RCEP countries, including: (1) assisting businesses in understanding tax policies in RCEP; (2) improve the investment environment to attract investment from developed countries in RCEP and (3) implement trade promotion programs to help businesses access markets in RCEP countries.

Keywords: Trade Balance, Vietnam, RCEP, VECM Model.

JEL Classification Code: C22, F14, F15, H72, O24

INTRODUCTION

According to a study by the World Bank (2018), the implementation of the Regional Comprehensive Economic Partnership (RCEP) can help Vietnam's GDP increase by 0.4% by 2030 if the direct benefits are taken into account, which can be up to 1% if indirect benefits from institutional reform are taken into account. RCEP, with the participation of 15 members, will create a market of 2.2 billion people, equivalent to $ 26.2 trillion, creating the largest free trade area in the world. The expansion of trade with the RCEP market will create a large supply chain, establishing a stable and long-term export market for Vietnam. However, according to economic experts, the biggest challenge of RCEP is that it can reduce the export volume of some countries, including Cambodia, Indonesia, the Philippines and Vietnam. Realizing the important role of RCEP in Vietnam's trade, the author decided to conduct research on the factors affecting the bilateral trade balance between Vietnam and RCEP member countries.

The Overview of RCEP

RCEP is a free trade agreement that includes 10 ASEAN member countries and 5 countries with which ASEAN has signed free trade agreements (Australia, China, Japan, Korea and New Zealand). RCEP was signed in Hanoi on November 15, 2020, aiming to form the East Asia Free Trade Agreement (EAFTA) and kick off the East Asia Comprehensive Economic Partnership (CEPEA). The objective of RCEP is to integrate the various FTAs that the 10 ASEAN countries have signed with Japan, Korea, Australia, New Zealand, India and China (ASEAN + 1 FTA) into a comprehensive Agreement to maximize economic benefits. RCEP will be a modern, comprehensive, high-quality and mutually beneficial Agreement covering the following areas: Trade in goods; Service; Invest; Economic and technical cooperation; Intellectual Property; Resolve disputes and other issues. The agreement is

expected to eliminate 90% of import tariffs among the signatories over the next 20 years, and establish a common rule for electronic commerce, exchange of goods, and ownership of goods. RCEP is the first free trade agreement between China, Japan, and South Korea, which are three of Asia's four largest economies. Since the time RCEP was signed, experts assert that it will help regulate the economy amid the COVID-19 pandemic, as well as "pull the central economic gravity towards Asia," before decline in the US economy.

The Status of Customs Revenues and Trade Liberalization in Vietnam

Figure 1 shows that Vietnam only maintains a trade surplus with Cambodia and Brunei with very little trade volume. Meanwhile, Vietnam has most of the trade deficit with RCEP countries and the deficit is increasing.
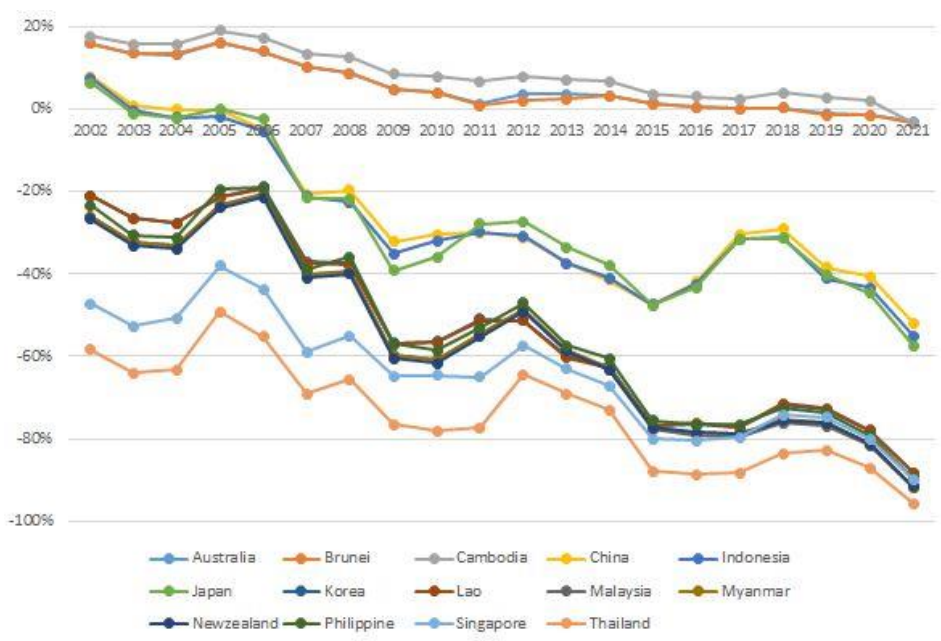
FIGURE 1
VIETNAM'S TRADE BALANCE WITH RCEP COUNTRIES

However, chart 2 also shows that Vietnam's export turnover to RCEP countries has also increased continuously in the past time along with the growth of the trade deficit. This means that Vietnam continuously develops trade with RCEP countries in both export and import directions. However, Vietnam still only exports mainly to ASEAN member countries, Vietnam's export turnover to China, Australia, Japan, Korea and New Zealand is still quite modest, not commensurate with the potential level of these markets Figure 2.
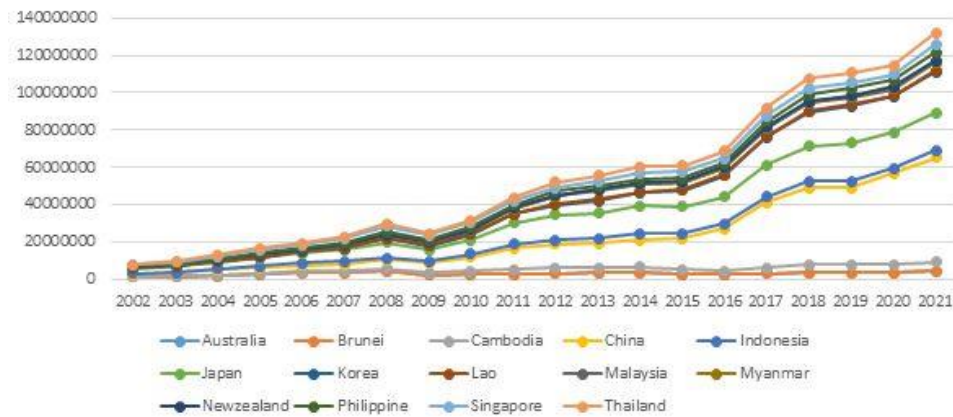
FIGURE 2
VIETNAM'S EXPORT TURNOVER TO RCEP COUNTRIES

Similar to exports, Vietnam also constantly increases imports from RCEP countries. Currently, Vietnam mainly imports raw materials from Japan and South Korea to produce electronic goods, and imports raw materials mainly from China and Korea to produce textiles... Figure 3.
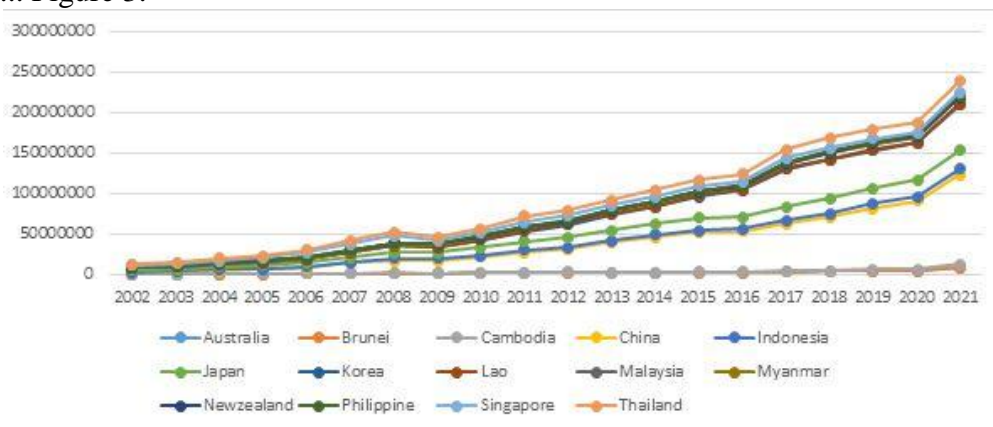

FIGURE 3
VIETNAM'S IMPORT TURNOVER TO RCEP COUNTRIES

LITERATURE REVIEW

Olugbenga (2003) studies the effect of exchange rate on the trade balance in Southeast Asian countries and analyzes the J-curve effect of three countries such as Thailand, Indonesia and Malaysia with trading partners including the US and Japan. Research results show that there is a positive relationship between exchange rate and trade balance in the long run in all cases. The study also shows the existence of J-curve effect in bilateral trade relations between Indonesia and Malaysia, the US and Japan; between Thailand and the US. In the relationship between Thailand and Japan, there were opposite developments, after the devaluation occurred in the beginning, the trade balance improved but became worse after that. This model does not support the J-curve hypothesis but is consistent with the S-curve model hypothesis.

Duasa (2007) studies the factors affecting the trade balance of Malaysia in the period 1974 - 2003. Using the ARDL model, the study shows that there exists a long-run relationship between income, money supply and balance of trade and there is no relationship between exchange rate and trade balance.

Mohanmmad (2010) has studied the factors affecting the trade balance, the case study of Pakistan. The study used secondary data by year from 1971 to 2008 with Johansen (1990) cointegration technique and error correction model ECM. Research results show that the trade balance is influenced by the following factors: Foreign income; FDI; domestic household spending and the real exchange rate.

Wang et al. (2012) studied the effect of yuan devaluation on the bilateral trade balance with China's 18 main trading partners. The study uses secondary statistics for the period 2005 - 2009. The results show that in the long run, the bilateral real exchange rate has a positive correlation with the bilateral trade balance between China and most of all major partners.

Ray (2012) analyzes the factors affecting the Indian trade balance. The study uses the VECM model to examine the long-run and short-run relationships of macroeconomic factors affecting the trade balance. The study uses data for the period 1972 - 2011. Research results show that there exists a short-run and long-term relationship between the real exchange rate, FDI, domestic consumption, and foreign income. FDI and foreign income have a negative impact on the trade balance Bao, (2019).

Kennedy (2013) studies on the factors affecting the trade balance of Kenya in the period 1963 - 2012. The study uses Johansen and ECM cointegration to examine the relationship between factors affecting the Kenya's trade balance. Research results show that FDI, exchange rate, government budget deficit have an impact on the trade balance.

Shawa & Shen (2013) have studied the factors affecting the trade balance, the case study of Tanzania. The study uses secondary statistics by year from 1980 to 2012 with the OLS method of least-average estimation. The research results show that the trade balance is affected by the following factors: FDI; human capital development, household spending, government spending, inflation, natural resources and foreign income Huong & Thom (2018).

Gzaw (2015) examines the short-run and long-run relationships between trade balance, income, money supply and real exchange rate in the case of the Ethiopian economy. The study uses the ARDL model with data for the period 1979 - 2013. The results show that there exists a long-run relationship between the trade balance and income, money supply and real exchange rate. Three variables of income, money supply, real exchange rate have positive effects on trade balance in the long run and no short-run relationship exists.

Alhanom (2016) studies on the factors of Jordan's trade balance. The study uses ARDL model to estimate the impact of factors affecting Jordan's trade balance in the period 1970-2010. The model proposes factors affecting Jordan's trade balance including: Real exchange rate, domestic income, foreign income. The results show that the real exchange rate has no impact on the trade balance in both the short run and the long run.

Ali (2017) studies the factors affecting the trade balance of Sudan in the period 1970 - 2014. The study uses the ARDL and ECM - ARDL models to examine the factors affecting the trade balance in the country in short term and long term. In the long run, the exchange rate, inflation, and real GDP per capita have negative effects on the trade balance; finance costs, private sector credit, and investment have a positive impact on the trade balance.

Mutana et al (2018) study on the macroeconomic factors affecting the trade balance of Kenya. The study uses the VECM model with five-year data from 1963 to 2016. The research results show that trade conditions, trade liberalization and FDI have significant positive impacts on the trade balance in the long run. The real exchange rate has a negative effect on the trade balance in the long run Law & Kien (2019).

Nguyen Huu Tuan (2011) analyzes the impact of macroeconomic variables on Vietnam's trade balance in the period from the first quarter of 1999 to the first quarter of 2010. The study uses the cointegration analysis method of Engle-Granger (1987) and

Johansen (1990) to measure the long-run relationships between variables. The analysis results show that in the long run, the trade balance is positively related to the real national income and the consumer price index of the trading partners, inversely with the multilateral real exchange rate and real national income, consumer price index and the size of FDI.

Diep Gia Luat and Tran Trung Kien (2013) study the impact of foreign direct investment capital on Vietnam's trade balance in the period 1992 - 2012. The results show that FDI inflows have an impact on Vietnam's trade balance, especially export value. The study has not found statistical evidence on the relationship between the value of imported goods and the variables of FDI, income and multilateral exchange rate Mohammad & Turney (2010).

Le Hoang Phong & Van (2016) study on the impact of macroeconomic factors on Vietnam's trade balance in the period 1986 - 2014. Research using ARDL model to test the relationship co-integration and ECM - ARDL model to assess the short-term impact of macro factors on the trade balance. Research results show that in both the short run and the long run, gross domestic product and exchange rate have a positive impact on Vietnam's trade balance. Meanwhile, money supply has a positive effect in the short term but a negative effect in the long term.

Research by To Trung Thanh (2016) on factors affecting Vietnam's trade balance in the period 1997 - 2015 is based on the estimation of a constrained VECM model. The results show that the larger the openness, the worse the trade balance. A high initial value of net foreign assets causes the trade balance to decline in the long run. A developed financial system helps to improve the trade balance while higher per capita income can worsen the trade balance. The real exchange rate does not have a strong correlation with the trade balance. Increasing FDI may increase the trend of trade deficit in Vietnam. Financial liberalization was found to significantly improve the trade balance in the long run Le Thi Anh Tuyet (2021).

A review of related studies shows that the issue of international trade balance is also an issue of interest to many researchers and has many different approaches and still many trade relationships of different countries have not been fully studied Onafowora (2003).

METHODOLOGY AND DATA

Methodology

Through a review of related studies, the author has the following observations: Currently, there is no research to estimate the change of Vietnam's trade balance with RCEP countries; To evaluate the factors affecting the trade balance between countries in the world, there are many studies using the VECM model based on some core factors as follows:

Gross Domestic Product (GDP): In economic theory, an increase in gross domestic product means an increase in the quantity of goods in that country. That affects the country's ability to export, as well as its import demand. However, the degree of influence of the GDP of the partner countries on the trade balance of the countries varies depending on the economic strategy of that country.

Exchange rate: Changes in foreign exchange rates will significantly affect foreign trade activities. When the local currency appreciates, businesses will tend to increase imports. The reason is because at this time the value of the local currency increases, businesses will have to pay less than before to buy the same amount of goods. Therefore, the appreciation of the local currency is also the time when imports are encouraged. Conversely, when the domestic currency depreciates, the cost of imports will increase. This will limit imports. Meanwhile, the majority of trade transactions between Vietnam and foreign countries are

using the US dollar, so in this study the author will analyze based on the exchange rate of the countries compared to the US dollar.

Value of foreign direct investment of countries into Vietnam. For developing countries, FDI capital plays a very important role, considered as an additional source of capital to improve domestic production capacity and increase income for workers. FDI creates a two-way trade relationship with the investing country, contributing to improving the trade balance between countries in the medium and long term.

Openness of the economy: This is a representative factor for the foreign trade policy of a country, calculated by the ratio of total import and export turnover to GDP. When foreign trade policy is more open-minded, liberalization makes the scale of exports and imports larger.

Geographical distance: The farther the geographical distance, the higher the transportation cost and at the same time increase the risks of damage, breakage, natural disaster, etc. for goods during international transportation. That increases the cost of the product. Therefore, geographical distance will affect the choice of source of goods, the choice of market when you want to import from another country or export to another country.

Tariffs: A. Laffer (1940) researched and produced a curve model showing the relationship between tax rates and total tax revenue, called Laffer curve Mohanmmad (2010). Based on the theoretical curve, Laffer proved that when the tax rate changes, it will affect the tax revenue by changing the quantity of imports and exports of a country Table 1.

The model of factors affecting the trade balance between Vietnam - RCEP is proposed as follows:

$$TB = \beta_0 + \beta_1 TRFrcep + \beta_2 \ln GDPcptpp + \beta_3 DIScptpp + \beta_4 \ln OPENrcep + \beta_5 \ln FDIrcep + \beta_6 \ln EXCrcep + \varepsilon$$

Data Description

Table 1
DATA DESCRIPTION

Variable	Interpretation and unit	expectation sign	Data sources
TB	Trade balance between Vietnam and RCEP countries by year (export value divided by import turnover)	/	Uncomtrade
TRF	Weighted average tariffs by year	-	World Bank
lnGDP	Logarithm of Gross Domestic Product by Year	+	World Bank
lnOPEN	Trade openness of countries by year.	+	World Bank
DIS	Khoảng cách từ thủ đô Việt Nam đến thủ đô các nước tính theo Km	-	timeanddate.com
EXC	Exchange rates of countries against the US dollar	+/-	World Bank
lnFDI	Value of foreign direct investment of countries in Vietnam	+	World Bank

Empirical Results and Discussion

Stationary and Unit Root Test

The test results show that all data series are non-stationary at the original data series, but they all are stationary after taking the first level of difference, or in other words, these data series are Table 2.

Table 2
NON-STATIONARY DATA SERIES

Variable	ADF value	p-value
TB	-4.443086	0.0007
TRF	-2.701398	0.0804
lnFDI	-3.269464	0.0213
lnGDP	-3.059857	0.0357
lnOPEN	-2.256093	0.1897
DIS	-2.701398	0.0804
EXC	-3.209391	0.0248
D(TB)	-9.557504	0.0000
D(TRF)	-4.934081	0.0002
D(lnFDI)	-7.781525	0.0000
D(lnGDP)	-7.052575	0.0000
D(lnOPEN)	-7.329906	0.0000
D(DIS)	-4.934081	0.0002
D(EXC)	-7.124968	0.0000

Cointegration Analysis

The results of the co-integration test by Johansen method indicate that the hypothesis that there are at least three cointegrating relationships is accepted. That means there is cointegration between the variables in the model at a lag of Table 3.

Table 3
COINTEGRATION ANALYSIS

Assume number of cointegration relations	Trace test				Maximum-Eigenvalue test			
	Eigenvalue	Trace Statistics	Critical value at 5%	Probability	Eigenvalue	Trace Statistics	Critical value at 5%	Probability
H : Have at most no co-links	0.686887	176.1318	95.75366	0.0000	0.686887	58.05957	40.07757	0.0002

There is at most one cointegration relation								
	0.634240	118.0722	69.81889	0.0000	0.634240	50.28895	33.87687	0.0003

The results of the cointegration test indicate that the hypothesis of at least two cointegration relationships is accepted. With this result, the study will conduct estimation by VECM method. Thus there is preliminary evidence to conclude that there exists a long-run equilibrium relationship between the variables. With the existence of a co-integration vector representing the long-run equilibrium relationship between the variables in the model described by the following equation:

$$TB = - 0.045TRFrcep + 0.1429\ lnGDPrcep + 0.0015\ lnOPENrcep + 0.1213lnFDIrcep$$

The above equation shows that in the long run, the trade balance between Vietnam and RCEP countries depends on the factors of the average tariff of the RCEP countries, the GDP of the RCEP countries, the trade openness of the RCEP countries and the RCEP countries. the amount of foreign direct investment capital of RCEP countries into Vietnam. These effects are all statistically significant at the 1% significance level.

Correlation Analysis and Estimation of VECM

In order to evaluate the impact of variables in the short run, the author estimates the VECM model and has the following results:

$$D(TB) = C(1)*(\ TB(-1) - 0.000132090824518*DIS\_\_KM\_(-1) + 5.56334542596e\text{-}06*EXCHA\_US(-1) + 0.170045208343*LNFDI(-1) - 0.27907730857*LNGDP(-1) - 0.00358075520546*OPEN(-1) + 0.0029499006904*TRF(-1) + 6.49791864761\ ) + C(2)*D(TB(-1)) + C(3)*D(TB(-2)) + C(4)*D(TB(-3)) + C(5)*D(TB(-4)) + C(6)*D(DIS\_\_KM\_(-1)) + C(7)*D(DIS\_\_KM\_(-2)) + C(8)*D(DIS\_\_KM\_(-3)) + C(9)*D(DIS\_\_KM\_(-4)) + C(10)*D(EXCHA\_US(-1)) + C(11)*D(EXCHA\_US(-2)) + C(12)*D(EXCHA\_US(-3)) + C(13)*D(EXCHA\_US(-4)) + C(14)*D(LNFDI(-1)) + C(15)*D(LNFDI(-2)) + C(16)*D(LNFDI(-3)) + C(17)*D(LNFDI(-4)) + C(18)*D(LNGDP(-1)) + C(19)*D(LNGDP(-2)) + C(20)*D(LNGDP(-3)) + C(21)*D(LNGDP(-4)) + C(22)*D(OPEN(-1)) + C(23)*D(OPEN(-2)) + C(24)*D(OPEN(-3)) + C(25)*D(OPEN(-4)) + C(26)*D(TRF(-1)) + C(27)*D(TRF(-2)) + C(28)*D(TRF(-3)) + C(29)*D(TRF(-4)) + C(30).$$

Estimation results of the VECM model show that in the short term, the trade balance between Vietnam and RCEP countries depends mainly on the distance between Vietnam and the RCEP countries, the exchange rate against the US dollar and GDP of the RCEP countries.

Model Verification

The test results of the residual show that the residuals of the VECM regression model are stationary with a high level of statistical significance (p - value = 0,000). From the results of the stationary test, the autocorrelation and the variance change of the residual in the regression model show that the residual from the ECM model is a white noise. Then, the

model estimation result is a BLUE (Best Linear Unbiased Estimator) estimate. Therefore, ECM regression results are reliable.

CONCLUSION AND POLICY IMPLICATIONS

Research results show that in the long run, the trade balance between Vietnam and RCEP countries is negatively correlated with the average tariff of RCEP countries. This is completely consistent with the impact theory of tariffs. Because according to this theory, increased tariffs will increase prices in the domestic market, reducing the competitiveness of imported goods, so Vietnam's export turnover to these countries will decrease. Meanwhile, according to the schedule of commitments in RCEP, the tariff elimination rate for Vietnam for ASEAN is at 90.3%, Australia and New Zealand reach 89.6%, Japan and Korea 86.7%, China is 85.6%. Therefore, the effective RCEP will be expected to facilitate a significant improvement of Vietnam's trade balance with RCEP countries.

The long-term research results also show that Vietnam's trade balance with RCEP countries is also positively influenced by the factors of gross domestic product, foreign direct investment capital and trade openness of the country. RCEP countries. For countries with high GDP, the market demand is high. many schools. This is a good opportunity to boost exports and improve the trade balance with these markets. Similarly, for countries with high trade openness, there are few barriers in international trade, so other countries can easily access their markets and boost exports, improving the trade balance. with these countries.

However, the short-term research results show that geographical distance has a negative impact on the trade balance between Vietnam and RCEP countries. It is understood that in the short term, when the geographical distance between Vietnam and the partner country is large, transportation costs will be relatively high, causing certain difficulties in Vietnam's promotion of exports to the country. That should have a negative impact on Vietnam's trade balance with these countries. However, in the long-term, the geographical distance factor is fixed and does not change, creating little impact trends, transportation costs depend mainly on the transport connectivity of each country.

The short-term research results also show that Vietnam's trade balance with RCEP countries is inversely proportional to that country's foreign exchange rate against the US dollar. As we all know, the US dollar is mainly used in import and export transactions. When the domestic currency of the importing country depreciates against the US dollar, the price of imported goods in terms of the domestic currency of the importing country increases significantly. This reduces the competitiveness of imported goods in the importing country's market, adversely affecting Vietnam's export results to these countries.

Vietnam has free trade agreements with ASEAN countries along with a number of partner countries such as China, Australia, Japan, and New Zealand. All these countries are very large import and export partners of Vietnam. Therefore, the effective RCEP Agreement brings new opportunities for businesses when there is an additional preferential import and export route with these partners. Enterprises have more options to enjoy tariff preferences and non-tariff conditions standardized within the framework of RCEP. However, businesses need to pay attention here that RCEP provides conditions for enjoying preferential tariffs, or so-called harmonized intra-regional rules of origin. Therefore, it will be easier for businesses to take advantage of the tariff preferences in this RCEP than in other free trade agreements. Enterprises can have many different options depending on their level, status, supply and production methods to enjoy tariff preferences in the most beneficial direction.

In addition, the countries in the RCEP are now at different levels of development, have different management mechanisms for import and export, as well as international trade transactions. Therefore, Vietnamese businesses can benefit greatly in RCEP by meeting minimum standard commitments on some non-tariff measures. This greatly affects the flow of

goods, import and export activities of enterprises. Therefore, businesses need to pay much attention to non-tariff commitments in RCEP to make the most of this benefit.

Among the remaining 14 RCEP member countries, most are major investment partners of Vietnam. Even in the list of 10 countries and territories with large investments in Vietnam, there are 6 partners from RCEP. In which, the largest is Korea, followed by Japan, Singapore, China, Malaysia, and Thailand. When RCEP has not taken effect, foreign investment capital from these countries has poured into Vietnam. Currently, both China, Japan, South Korea..., and even Singapore, Thailand, and Malaysia are speeding up investment abroad to expand production and supply chains. Therefore, in order to accelerate investment attraction from RCEP, or from other potential partners, Vietnam also needs to speed up the improvement of the investment environment and develop attractive policies to welcome new investment flows.

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