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Title:

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1. <u>Introduction</u>

With the passage of the Renovation

then sign several unilateral, bilateral, and regional trade agreements, both as an individual state and as a partner within ASEAN. Vietnam signed trade agreements with ASEAN and amongst the plus 3 nations (Japan, China, and Korea) and the ASEA Free Trade Area (AFTA), which were important in achieving economic growth through an expansion of its trade balance. To Minh (2010), using a Generalized Tukey Lambda (GTL) Model, indicated that Vietnam's economy in sectoral production adjustment saw rapid growth in the manufacturing and machinery. This is in line with Nguyen (2021), who also noted that it was also enabled by the country's ability to quickly attract FDI through the implementation of many industrial parks and export processing zones, collectively known as special economic zones throughout the country. Reflecting on this, the FTA more clearly shaped investment decisions between the participating nations, and the lowering of tariffs resulted in Vietnam receiving a significant increase in FDI from Korea. As Duong et al. (2019) concluded, Korea sought to set up factories to harness the intellectual potential and present expertise in the country, quickly becoming the nation's top investor in 2017. Given the focus on industrial parks and other manufacturing facilities, the effects on the nation's exports have been somewhat self-evident. The data from Tran et al. (2019) shows shifts in the nation's exports from raw products and low complexity manufactured goods like fuel and footwear in 2000 towards complex machinery and electronics in 2015, with the segment contributing the largest portion of Vietnamese exports, something which continues to this day.

Additionally, the effects of the FTA between Vietnam and Korea favor export makeup and its sophistication as the foreign direct investments (FDI) targeted production of high value-adding industries. Korean FDI in the country has generally been from companies in high complexity electronic goods, who choose Vietnam as a center of operations and manufacturing due in large part to the strength of its workforce. This is expected to have a favorable effect on

the host nation. As Tran et al. (2019) determined, Vietnamese firms were able to produce more

sophisticated products when foreign companies were able to locate intermediate inputs in the

domestic market supply.

Figure 1. Vietnamese Export Trends in 2010,2015 and 2020. Source: WITS
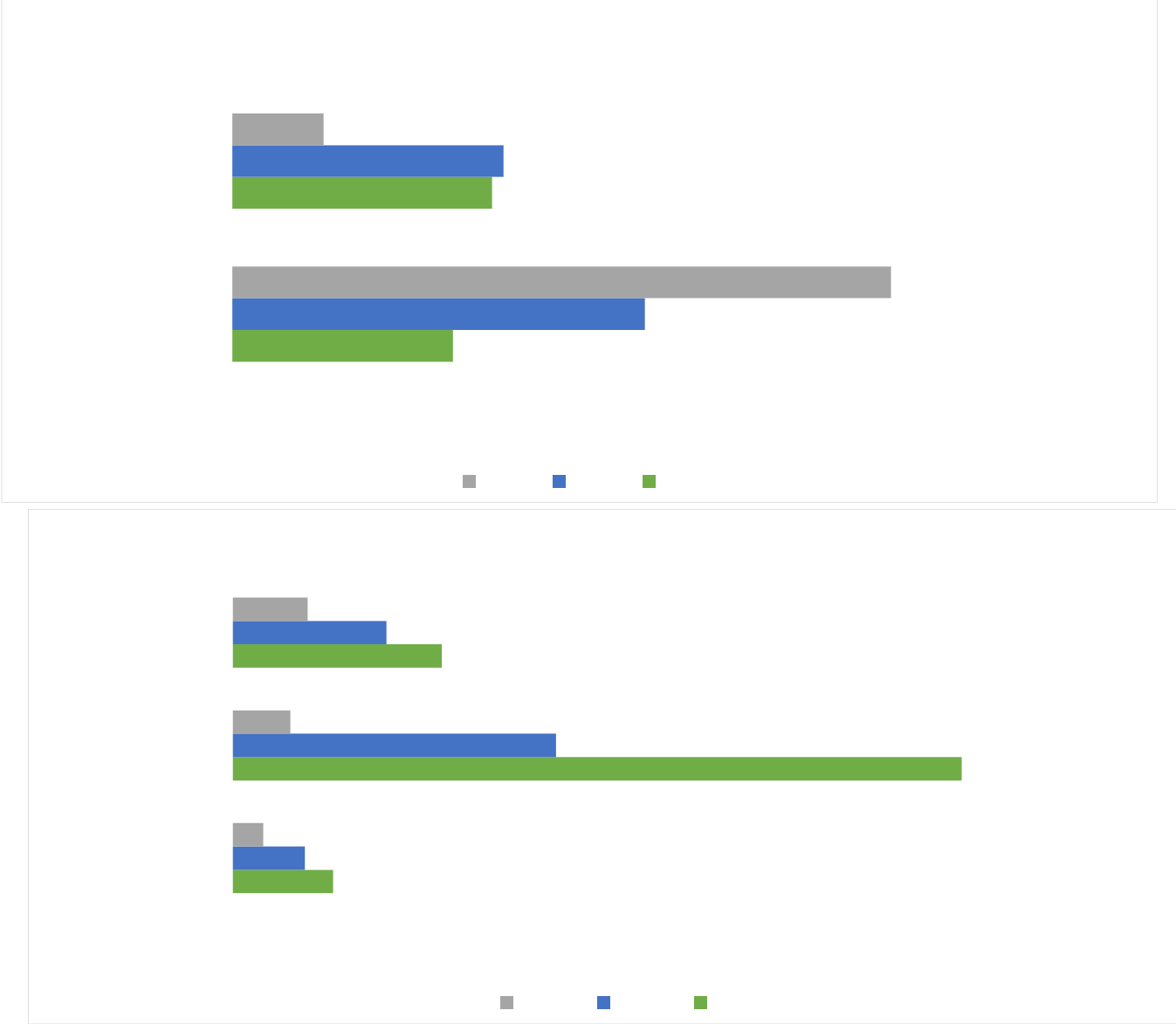
This is explained somewhat by how multinational corporations (MNCs) tend to operate in

Vietnam, as they tend to focus on cooperation between local partners to produce intermediate

products, which not only benefits the MNC through reduced costs, but also helps Vietnamese

firms become more competitive, improving their production capability through learning and

observation. As such, the initial

a system of equations where the variables are modeled in terms of their past performance. As such, there is one equation for determining each variable and where other variables and the past values of the variable of interest are used as independent variable. In other words, each equation uses a set of time-lagged values of each of the included variables, including the dependent variable as well. For two series of data, labeled   and   the VAR model will consist of these equations:

Each of these equations contains an error that will equate to zero based on the past information on *X* and *Y*

To check the stability of the VAR model, an Eigenvalue stability analysis was conducted on both the export and import datasets, with their respective analyses determining that all values of both sets were within the unit circle, ensuring that the datasets satisfied the stability condition. As Figure 3 shows, all of the variables used were within the matrix and as such meant that the analysis was done correctly and that the dataset was stable (Figure 1).

Figure 1: Eigenvalue stability test results for both Exports (left) and Imports (right)

4.1 Results:

This paper determines the impact of FTA signed between Vietnam and Korea and examines this effect both in the short-term and long-term perspectives. The results of the Granger causality test allow us to observe the short-term effect of the FTA. They have been summarized in Table 2 for both exports and imports. In the case of exports, the passage of the FTA between both trading nations is determined to have a causal relationship with exports to Korea and Korean GDP, whilst not having a relationship with Vietnamese GDP and the exchange rate of Vietnamese Dong (VND) to Korean Won (KRW)

in the vertical column represent the value we are taking as independent to examine for short

baseline value of exports by period 4. As such, the graph indicates that the FTA had a largely short-term effect on exports and that the Vietnamese government could stand to enact additional policies to encourage exporting goods to Korea, or to re-examine the FTA and draft a newer agreement, with additional considerations for the times.

Figure 2: Impulse-Response Function for FTA on Export

With respect to imports from Korea, the effects of the FTA have been much more significant. Though it has been successful in encouraging imports, the agreement initially saw a decrease in imports, a trend that was only reversed in period 2. It would spark a series of adjustments from there on out that would alternate between periods of positive and negative import growth (Figure 3). However, something to note is that the imports do show a trend of stabilization as time goes on. More specifically, the data shows that from the 6

be conducted to determine if new policies should be made to encourage Korean imports or to expand the benefits granted by the FTA to both parties.

Figure 3: Impulse-Response Function for FTA on Imports
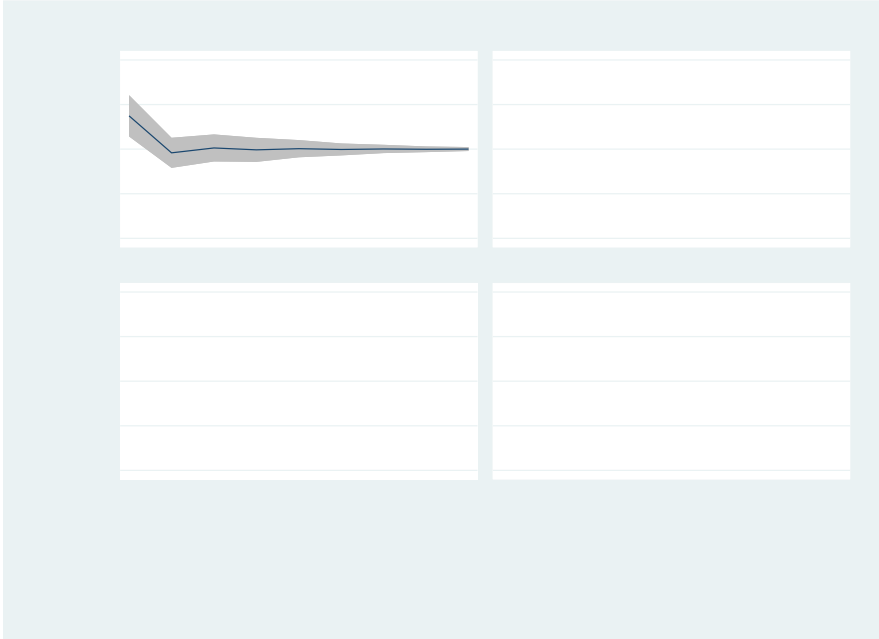
Overall, these outcomes are similar to those found by the US, Mexico and Canada after examining the effects of the North American Free Trade Agreement, henceforth known as NAFTA found that while the three nations of the US, Canada and Mexico saw trade cr).ion between them, the largest effect was documented in the US due to the opening up previously closed economies, in this instance being Mexico (Mehanna and Shamsub, 2002). This outcome mirrors that of the Korea-Vietnam free trade agreement in that the largest effect was on Korean imports to Vietnam, which had the largest effect due to a similar opening of the Vietnamese economy following the removal of trade barriers as outlined by the agreement. However, NAFTA's effects have also become increasingly muted in recent years and as such has led to the US-Mexico-Canada (known henceforth as USMCA) agreement being made, having come into

effect in 2020. As such, a similar review of the existing agreement between Vietnam and Korea is encouraged to allow both nations to continue benefiting from one another.

5. <u>Conclusion</u>

The free trade agreement between Vietnam and Korea is an agreement that had a large effect on both parties. As a part of a larger backdrop of free trade agreements that Vietnam made during the time it came into force, the FTA between Vietnam and Korea played a part in the rapid growth in Vietnamese GDP and more specifically in the machines and electronics categories, due to an agreement to develop and source parts from local intermediaries. From the Granger causality test conducted, a strong causal link was found between the enforcement of the agreement, Vietnamese exports to and imports from Korea and the Korean GDP, whilst the link between the ratification of the FTA and Vietnamese GDP could only be found in the case of imports and only at a 10% significance anyway, indicating that there was not a strong enough quantity of evidence to show a causal link between the two variables. Additionally, the impulse-response function shows that the FTA has had a short-term effect on Vietnamese exports to Korea, which have stabilized after 4 years and a long-term effect on Vietnamese imports from Korea, which has yet to completely stabilize like exports have but has shown signs of stabilization since the 6th pf2 re0 612 792 reW* nBT/TT0 12 Tf72.024 361.61 Td(qugT3 nBT.e (e)4 (tna)-7 eo re

Motivation and Acknowledgements

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