An Analysis of Factors Affecting on ASEAN Import Mechanical and Electrical Products from China by Using Panel Data Analysis

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Abstract

China became the largest exporter of mechanical and electrical products in 2008 (China Year Book). With the establishment of China-ASEAN Free Trade Area and implement One Belt and Road Plan. Greatly promote trade between China and ASEAN, and ASEAN was China’s third largest trading partner in 2012. Mechanical and electrical products are ASEAN main import goods. So, find out the influencing factors that affect on ASEAN import mechanical and electrical products from China is significant to China. This paper uses the panel cointegration theory to study on macro factors such as ASEAN’s GDP, exchange rate, foreign direct investment and inflation rate through annual data covering the period 2000 to 2016. From the result, It was found that ASEAN’s GDP and foreign direct investment are mainly affect ASEAN’s import mechanical and electrical products from China. Based on the results of this study, the paper proposes several suggests for China to promote the export of mechanical and electrical products to ASEAN.

Key Words: Mechanical and Electrical Products, Import, Panel data analysis
JEL Classification: C 19, G 13, G 14
1. Introduction

Since the reform and opening up, China's foreign trade value has been constantly increasing, especially the export of mechanical and electrical products. Since 1995, the mechanical and electrical products are major trade product and has maintained the export of the first major categories of goods. According to China Customs statistics, the export value of mechanical and electrical products is 227.46 billion US dollar in 2003 up to 1310.72 billion US dollar in 2015. It’s the largest value of China's trade goods, accounted for 53.7% of China's trade value, of which accounted for nearly 60% of China's exports.

ASEAN (Association of Southeast Asian Nations) was created on 8 August 1967. Including 10 countries, Member States are Malaysia, Indonesia, Thailand, Philippines, Singapore, Brunei, Vietnam, Laos, Myanmar and Cambodia. ASEAN countries located in south of China and China borders Myanmar, Vietnam and Laos. Superior geography and cultural environment make bilateral trade more convenient. In November 2002, China and ASEAN’s leaders signed an agreement of "China-ASEAN Framework Agreement on Comprehensive Economic Cooperation "(ASEAN-China Centre), marking a new stage of economic cooperation between China and ASEAN, and lay the foundation for the establishment of China-ASEAN Free Trade Area. January 1, 2010 China and the ASEAN Free Trade Area was established, more than 90% of the goods achieved zero tariffs. In the end of 2012, the Ministry of Commerce's statistics show that the trade between China and ASEAN achieve to US $ 440 billion in 2012, the value of China's exports to ASEAN is US $ 244.272 billion, import value is US $ 195.821 billion. China is ASEAN's largest trading partner and ASEAN is China's third largest trading partner.

In 2010, the value of China’s mechanical and electrical products exported ASEAN is $68.06 billion, accounting for 7.29% of the total export to world. In 2015, China’s mechanical and electrical products exported ASEAN reached $120.79 billion, Accounting for 9.22% of the total export world. Among the ASEAN countries, Malaysia, Singapore and Thailand are the three countries with the largest share of trade in mechanical and electrical products with China, with a total trade value of $47.583 billion, $36.183 billion and $28.255 billion respectively in 2010, accounting for 71.8% of the total trade of mechanical and electrical between China and ASEAN. But Brunei, Laos, Myanmar and Cambodia are very small, lass than $2billion dollar.

Along with the implementation of ‘the belt and road’ policy and start bulid China-Southeast Asia High Speed Rail plan. China and ASEAN countries’s trade will be more and stronger. Therefore, studying the influence factors of ASEAN import China’s mechanical and electrical products is important for China to improve the value of trade. Based on others researcheres, real exchange rate and exchange rate volatility does affects export decisions of
producers. Real exchange rate volatility was found to have a significant and negative impact on the export demand\(^1\). The FDI and import have stably long run equilibrium relation-ship, FDI and our imports demand were positively related. the inflows of FDI in the country are followed by a rise in demand for imports\(^2\). Inflation distorts investment in a country. In most countries, income from capital gains, interest and depreciation, are computed in nominal terms. As a result, inflation is currency devaluation which bring reducing on import and export\(^3\). Income, FDI, exchange rate show positive and statistically significant impacts on trade\(^4\). EU’s GDP is the most important factors that influence on China’s mechanical electrical products export to EU and the second is the exchange rate\(^5\). Therefore the study will analyze the factors affecting on ASEAN import mechanical and electrical products from China by ASEAN’s GDP, exchange rate, FDI and inflation rate.

This study will use co-integration analysis to study the relationship between ASEAN’s import value and ASEAN’s GDP, exchange rate, FDI, inflation rate in the long run.

2. Literature Review

Chinese scholars have made a lot of achievements in the research on the mechanical and electrical products trade between China and ASEAN. Yang Yan(2012) found there is a common in the technical level, resource endowment and the international division of labor in China and ASEAN countries which making both mechanical and electrical products intra-industry trade increased\(^6\). Sun wei (2012) analysis the difference of the mechanical and electrical products competitiveness between China and ASEAN. Conclusions that China’s competitiveness of mechanical and electrical products keep a sustained growth. Microelectronic devices and semiconductor products are main export products\(^7\). Cao Chen (2012) firstly analyzed the status and characteristic of mechanical and electrical products trade in China and ASEAN and made up a theory and index system of competitiveness and complementarity, and subsequently analyzed the factors of affecting Chinese export of mechanical and electrical products to ASEAN market. The result indicates that exist the competition and complementary of mechanical and electrical trade between China and ASEAN\(^8\).

The panel data co-integration analysis have been a significantly method on study on the long run relationship between dependent variable and independent variable. Recent literature suggests that panel-based unit root tests have higher power than unit root tests based on individual time series. See Levin, Lin and Chu (2002), I’m, Persaran and Shin (2003) which mention test purchasing power parity (PPP) and growth convergence in macro panels using country data over time. These method also see more detail in Chukiat Chaiboonsri\(^9\). ADF test statistic based on residual-based test follow concept of Kao (1999) to test cointegration in panel and PP-test statistic based on concept of Pedroni (1995) to test cointegration in panel.
Both ADF-statistics and PP-statistic have same null hypothesis of no cointegration in panel. Combined individual test (Fisher/Johansen) to testing for cointegration in panel data from individual cross-sections\textsuperscript{[10]}. Parida, P.C, Sahoo, P.(2007) attempt to examine the export-led and manufacturing export-led growth hypothesis for four South Asian Countries by using panel cointegration technique for the period 1980–2002. The results also substantiate the existence of manufacturing export-led growth hypothesis\textsuperscript{[11]}. Veyssel Avsar and Kemal Turkcan(2013) using import unit values of 58 motor vehicle products and 193 auto-parts by using panel data cointegration techniques to examines the impact of exchange rate volatility on the U.S. automotive industry exports and imports from 37 major trading partners\textsuperscript{[12]}. Lots of Chinese researcher study on the trade of mechanical electrical products bewteen China and ASEAN. Most of them are study on the current status of trade or competitive or complementary. Hardly study on the influencing factors of ASEAN. And most using the method like calculate the trade index or use the gravity model. Panel data cointegration test is more and more popular as a research method. It considering time series and cross-sectional, it’s more accurate and significant. Therefore, I will use the Panel data cointegration method to analysis the factors affecting on ASEAN import mechanical and electrical products from China.

3. Methodology

3.1 Panel unit root test

Panel unit root test is based on the time series of unit root test developed, data need to be test before regression to avoid false regression. The basic idea is to assume that the sample obeys a sample distribution and construct a test statistic of the distribution. The null hypothesis is have unit root and alternative hypothesis is no unit root. At the significance level, we can decide to reject or accept the null hypothesis by P value. The literatures of Levin,Lin and Chu(2002), Breitung(2000), Lm,Pesaran and Shin(2003), Maddala and Wu(1999) and Choi(2001) and so on have already detailed description panel unit root test from different aspects. The method of panel unit root test is mainly including LLC, IPS, Breitung, ADF-Fisher and PP-Fisher. LLC is based on the common unit root process and other four are individual unit root process.

3.2 Panel data Cointegration

In this study, we introduced Pedroni (2004) and Kao (1999) to test whether there are relationships among dependent variable and independent variable. Kao (1999) considered the spurious regression for the panel data and employed the DF and ADF test, while Pedroni (2004) suggests a Phillips-Perron-type test for cointegration.

(1) Kao test

Kao (1999) uses the DF test and ADF test for panel cointegration test.
DF test mainly used residual of equation (1) to anaysis:

\[ \hat{e}_{it} = \rho \hat{e}_{i,t-1} + v_{it} \]  

For the ADF test, the following regression is considered:

\[ \hat{e}_{it} = \rho \hat{e}_{i,t-1} + \sum_{j=1}^{p} \phi_j \Delta \hat{e}_{i,t-j} + v_{it} \]  

To test the null hypothesis of no cointegration amounts to test \( H_0 : \rho = 1 \) in equation (2) and (3) against the alternative hypothesis that \( Y \) and \( X \) are cointegration \( (\rho > 1) \). Kao (1999) developed both DF-Type test statistics and ADF test statistics were used to test cointegration in panel also both DF test statistics and ADF test statistics can present below that:

\[ ADF = \frac{t_{ADF} + \sqrt{6N} \sigma_{\epsilon}^2}{2 \sigma_{\epsilon}^2} \Rightarrow N(0,1) \]  

(2) Pedroni Test

Panel cointegration regression equation:

\[ y_{it} = \alpha + x_{it}\beta + e_{it}, i = 1, ..., N, t = 1, ..., T \]  

For non-parametric estimators (panel v-statistic, panel \( \rho \)-statistic, panel PP-statistic, panel ADF-statistic, Group \( \rho \)-statistic, groupADF-statistic), estimate equation:

\[ \hat{e}_{it} = r_i \hat{e}_{i,t-1} + \mu_{i,t} \]  

Get long-term variance of \( \hat{\mu}_{i,t} \), is \( \sigma_{\epsilon}^2 \). For the parametric estimator (panel t-statistic) Get variance of \( \hat{\mu}_{i,t} \), is \( s_i^2 \). Using the above results, we constructed seven statistics and normalized them , finally get \( x_{N,T}^* = \frac{x_{N,T} - \mu\sqrt{N}}{\sqrt{\nu}} \).

(3) Fisher Test

In term of combined individual test (Fisher/Johansen) use Fisher’s result to propose and alternative approach to testing for cointegration in panel data by combining test from individual cross-sections to obtain at test statistics. If \( \Pi_i \) is the p-value from an individual cointegration test for cross-section i, then under the null hypothesis:

\[ -2 \sum_{i=1}^{n} \log(\Pi_i) \rightarrow \chi^2_{2n} \]  

The standard rank test statistics is defined in terms of average of the trace statistic for each cross section unit and mean and variance of traces statistics.

### 3.3 Panel data model selection and regression

Usually panel data has three model selection:

1. **Pooled Regression Model.**
   \[
   y_{it} = \beta_0 + \beta_1 x_{it} + \mu_{it} \quad (8)
   \]
   If there is no significant difference between individuals in different time and cross-section, then can uses the ordinary least squares (OLS) Estimate parameters.

2. **Fixed Effects Regression Model.**
   \[
   y_{it} = \beta_1 x_{it} + v_i + \mu_{it} \quad (9)
   \]
   If the models have different intercepts for different sections or different time series, regression parameters can be estimated by adding dummy variables to the model.

3. **Random Effects Regression Model.**
   \[
   y_{it} = \beta_0 + \beta_1 x_{it} + v_i + \mu_{it} \quad (10)
   \]
   If the intercepts in the fixed-effects model include the average effect of the cross-section random error term and the time-random error term, and both of these random error terms follow a normal distribution, the fixed effect model becomes a random effect model.

In the panel data model selection, using the F test to decide the use of pooled regression model or fixed effect model, and then use Hausman test to determine use the random effect model or fixed effect model. After confirm the model, we can do the regression.

### 3.4 Empirical Model

Firstly, considering the influencing factors on import. A function is constructed to estimate the elasticity of import as follows:

\[
\ln Y_t = \alpha_t + \beta_1 \ln X_{1t} + \beta_2 \ln X_{2t} + \beta_3 \ln X_{3t} + \beta_4 \ln X_{4t} + \mu_t \quad (11)
\]

Where \( \ln Y_t \) is the (the logarithm of) import value of mechanical and electrical products that ASEAN import from China. \( \ln X_{1t}, \ln X_{2t}, \ln X_{3t} \) and \( \ln X_{4t} \) are ASEAN’s GDP, exchange rate, foreign direct investment and inflation rate at t year. \( \alpha_t \) is Intercept term and \( \mu_t \) is error term. \( \beta \) is explanatory variables, represent elasticity coefficients of \( X_1, X_2, X_3 \) and \( X_4 \) respectively.

### 3.5 The data

For the sample of this study, we use the value of ASEAN import mechanical and electrical products from China, ASEAN’s GDP, exchange rate, foreign direct investment and inflation rate that collected from UN Comtrade Database and The World Bank.
Mechanical and electrical product generally include machinery and equipment, electrical equipment, transportation, electronic products, electrical products, instrumentation, metal products and its parts and components, components. According to Harmonized Commodity Description and Coding System (HS), this research will use HS class 16, 17 and 18 as an object.

From 2000 to 2016, 10 countries, that provides us with a sample of 170 observations. Table 1 displayed the sample statistics of output and input variables.

Table 1: Summary statistics of the variables

<table>
<thead>
<tr>
<th>Output variables</th>
<th>Variables</th>
<th>Symbol</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.Value of mechanical and electrical products</td>
<td>$Y_{it}$</td>
<td>dollar</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Input variables</th>
<th>Variables</th>
<th>Symbol</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.ASEAN’s GDP</td>
<td>$X_{1it}$</td>
<td>dollar</td>
</tr>
<tr>
<td></td>
<td>3.ASEAN’s exchange rate</td>
<td>$X_{2it}$</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>4.ASEAN’s foreign direct investment</td>
<td>$X_{3it}$</td>
<td>dollar</td>
</tr>
<tr>
<td></td>
<td>5.ASEAN’s inflation rate</td>
<td>$X_{4it}$</td>
<td>-</td>
</tr>
</tbody>
</table>

### 4. Results and Discussion

Based on the model constructed above, this research used the panel unit root test of the variables by four standard method tests. Table 2 present the results of the panel unit root tests based on the four methods test for all variables were used in modeling.

Table 2: Results of panel unit root tests based on 4 method tests for all variables

<table>
<thead>
<tr>
<th></th>
<th>LLC</th>
<th>IPS</th>
<th>ADF-fisher</th>
<th>PP-fisher</th>
</tr>
</thead>
<tbody>
<tr>
<td>lnY</td>
<td>-0.7490</td>
<td>0.4579</td>
<td>22.2987</td>
<td>16.5894</td>
</tr>
<tr>
<td></td>
<td>(0.2269)</td>
<td>(0.6765)</td>
<td>(0.3245)</td>
<td>(0.6795)</td>
</tr>
<tr>
<td>lnX1</td>
<td>3.7743</td>
<td>3.85144</td>
<td>5.41732</td>
<td>6.6816</td>
</tr>
<tr>
<td></td>
<td>(0.9999)</td>
<td>(0.9999)</td>
<td>(0.9995)</td>
<td>(0.9976)</td>
</tr>
<tr>
<td>lnX2</td>
<td>1.6043</td>
<td>2.2243</td>
<td>10.4123</td>
<td>11.2640</td>
</tr>
<tr>
<td></td>
<td>(0.9457)</td>
<td>(0.9869)</td>
<td>(0.9601)</td>
<td>(0.9391)</td>
</tr>
<tr>
<td>lnX3</td>
<td>-2.2598</td>
<td>-0.4034</td>
<td>25.6259</td>
<td>29.5234</td>
</tr>
<tr>
<td></td>
<td>(0.0119)</td>
<td>(0.3433)</td>
<td>(0.1785)</td>
<td>(0.0780)</td>
</tr>
<tr>
<td>lnX4</td>
<td>-5.4903</td>
<td>-3.9934</td>
<td>54.5648</td>
<td>55.0573</td>
</tr>
<tr>
<td></td>
<td>(0.0000)</td>
<td>(0.0000)</td>
<td>(0.0000)</td>
<td>(0.0000)</td>
</tr>
</tbody>
</table>

Note: (1) The number in parentheses is p value

In the table 2, the lnY and lnX1 in four tests all accepting the null hypothesis of a unit root, means that the variables are non-stationary. lnX2 and lnX3 indicate that IPS, ADF-fisher and PP-fisher accepting the null hypothesis at 5% significance level but except LLC test. Due to the IPS test considers the nature of the small sample, if the results of several test methods are inconsistent, mainly based on IPS test results. So lnX2 and lnX3 are non-stationary. LnX4 reject the null hypothesis of a unit root indicate that lnX4 are stationary. From the results of the panel unit root test, it can be concluded that most variables were used in this model have unit root. So all variables should be take first differencing or take second differencing. The results are on table 3.
Table 3: Results of panel unit root tests after first differencing

<table>
<thead>
<tr>
<th></th>
<th>LLC</th>
<th>IPS</th>
<th>ADF-fisher</th>
<th>PP-fisher</th>
</tr>
</thead>
<tbody>
<tr>
<td>D(lnY)</td>
<td>-6.3326</td>
<td>-5.7086</td>
<td>65.5039</td>
<td>102.761</td>
</tr>
<tr>
<td>lnX1</td>
<td>-8.2017</td>
<td>-4.3554</td>
<td>50.6682</td>
<td>66.0494</td>
</tr>
<tr>
<td>lnX2</td>
<td>-6.5632</td>
<td>-3.5254</td>
<td>44.6815</td>
<td>68.9691</td>
</tr>
<tr>
<td>lnX3</td>
<td>-8.0976</td>
<td>-5.8993</td>
<td>68.1383</td>
<td>86.6464</td>
</tr>
</tbody>
</table>

Note: (1)The number in parentheses is p value

After the first-order difference, the variables lnY, lnX1, lnX2 and lnX3 reject the null hypothesis of a unit root at the significance level, indicate all variables are stationary. Conclusion that lnY, lnX1, lnX2 and lnX3 are I(1) process. lnX4 is I(0) process. Next we can use all variables to do the cointegration test.

Table 4: Results of the panel cointegration test

<table>
<thead>
<tr>
<th>Cointegration tests</th>
<th>Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedroni test</td>
<td>Panel v-statistic</td>
<td>0.5246</td>
</tr>
<tr>
<td></td>
<td>Panel rho-statistic</td>
<td>1.4227</td>
</tr>
<tr>
<td></td>
<td>Panel pp-statistic</td>
<td>-5.8397</td>
</tr>
<tr>
<td></td>
<td>Panel ADF-statistic</td>
<td>-3.2617</td>
</tr>
<tr>
<td></td>
<td>Group rho-statistic</td>
<td>3.2024</td>
</tr>
<tr>
<td></td>
<td>Group pp-statistic</td>
<td>-7.9528</td>
</tr>
<tr>
<td></td>
<td>Group ADF-statistic</td>
<td>-4.0080</td>
</tr>
<tr>
<td>Kao test</td>
<td>None</td>
<td>-2.0718</td>
</tr>
<tr>
<td>Fisher</td>
<td>At most 1</td>
<td>82.00</td>
</tr>
<tr>
<td></td>
<td>At most 2</td>
<td>324.6</td>
</tr>
<tr>
<td></td>
<td>At most 3</td>
<td>121.9</td>
</tr>
<tr>
<td></td>
<td>At most 4</td>
<td>57.82</td>
</tr>
<tr>
<td></td>
<td></td>
<td>44.38</td>
</tr>
</tbody>
</table>

Note: * Indicates rejection of null hypothesis at significance level

Based on the panel unit root test, the panel cointegration test is used to test whether there is a long-term relationship among the non-stationary sequences. Pedroni test, Kao test and Fisher test three methods to test the cointegration of lnY, lnX1, lnX2, lnX3 and lnX4.

In Pedroni test, the first four are described by the within-dimensions and the other three are described by the between-dimension. Under small sample conditions (T<20), the panel ADF-Statistic and Group ADF-Statistic are more accurate than other statistics. So when the results are different, we mainly depend on this both statistics. From the table 3, Panel pp-
statistic, Panel ADF-statistic, Group pp-statistic and Group ADF-statistic are reject the null hypothesis of no cointegration at 1% significance level. Therefore, lnY, lnX₁, lnX₂, lnX₃ and lnX₄ have cointegration with each other. The Kao test and fisher test indicate that the P value are less than 0.05, its mean reject the null hypothesis of no cointegration at 5% significant level. The Fisher test, none is mean there are no cointegration of null hypothesis, the p value is 0.0000, indicate reject the null hypothesis, so there are exist cointegration relation. In conclusion, the import value of Mechanical and electrical products from ASEAN to China, ASEAN’s GDP, ASEAN’s exchange rate, ASEAN’s FDI and ASEAN’s inflation rate have cointegration relationship and shows a long-term equilibrium between them. Next part is panel data regression analysis.

Panel data model selection usually has three forms: (1)Polled OLS regression model; (2) Fixed Effect model; (3) Random Effect model.

Firstly using the F test to determine whether use Polled OLS regression or Fixed Effect model. The Null hypothesis is using Polled OLS model; alternative hypothesis is using fixied effect model.

<table>
<thead>
<tr>
<th>Effects Test</th>
<th>Statistic</th>
<th>d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section F</td>
<td>34.6412</td>
<td>(9.156)</td>
<td>0.0000</td>
</tr>
<tr>
<td>Cross-section Chi-square</td>
<td>186.6809</td>
<td>9</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Calculated by Eviews 8.0

From the table 5, the P value is 0.0000, means reject the null hypothesis at significant level. So using fixed effect model is more effective than pooled OLS regression model.

Next is the effect model selection between fixed effect model and random effect, Hausman test will be used to determine the fixed effect or random effect, the test results in Table 6.

<table>
<thead>
<tr>
<th>Summary</th>
<th>Chi-Sq. Statistic</th>
<th>Chi-Sq.d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>11.6909</td>
<td>4</td>
<td>0.0198</td>
</tr>
</tbody>
</table>

Calculated by Eviews 8.0

In Hausman test, the null hypothesis is random effect model more effective to estimate and the alternative hypothesis is fixed effect model more effective to estimate. In the Table 6 shows that P value less than 0.05, so we reject the null hypothesis and accept the alternative hypothesis. So use the fixed effect model is more effective.

Due to the large differences between the ASEAN countries, the cross-section heteroscedasticity should be exist in those data. So GLS method (generalized least squares method) is selected in the regression, the variance of residuals of cross-sectional model are
used as weights to estimate the model, meanwhile choose Cross-section weights, we get the equation:

\[ \ln Y = -20.52 + 1.332 \ln X_1 + 0.018 \ln X_2 + 0.357 \ln X_3 + 0.021 \ln X_4 \]

\[ \begin{align*}
(-14.35) & \quad (9.46) \quad (0.28) \quad (3.54) \quad (0.67)
\end{align*} \]

\[ R^2 = 0.9679, \quad \text{F-statistic} = 361.6238, \quad \text{Prob}(F\text{-statistic}) = 0.0000 \]

Where, the goodness of fit \( R^2 \) is 0.9679, this implies that 96.79% of the variation in the value of ASEAN import China mechanical and electrical products is explained by the explanatory variables in the model. From the regression results, we found the coefficients are all positive, means all independents have positive influence on ASEAN import China mechanical and electrical products. These results are also in agreement with Ni Haofei\(^{[13]}\) (2013) and Sadia Bibi\(^{[14]}\) (2014) that GDP, FDI, exchange rate and inflation rate can affecting the import. The \( \ln X_1 \) has a large influence, coefficient of elasticity reach 1.332. Means ASEAN’s GDP increased 1% will caused 1.33% increased at import value. Followed by \( X_3 \), is 0.357, Means ASEAN’s foreign direct investment increased 1% will caused 0.36% increased at import value the. influences of \( X_2 \) and \( X_4 \) are relatively small, is 0.018 and 0.021. Means that ASEAN’s exchange rate and inflation rate have less effect on import value of ASEAN.

5. Conclusions and Recommendations

This study has applied some methods of panel data to analyze the factors affecting on ASEAN import mechanical electrical products from China. From the regression results, the GDP of the importing countries have the greatest impact on the export of China’s mechanical and electrical products to the ASEAN market. As an exporter, China can’t directly affected ASEAN’s GDP. With the establishment of ASEAN-China’s FTA, constructing Great Mekong Subregion Cooperation (GMS) and Lancang-Mekong Cooperation (LMC) and One Belt and Road, those all will promote the trade between ASEAN and China. For China increasing exports of mechanical electrical products, the effective method is to increase value-added products, product competitiveness, stimulate consumer demand in importing countries and increase potential consumption.

The second factor is FDI. ASEAN’s FDI can increased the ASEAN’s import value of mechanical electrical products. In this part, China can appropriately increase China’s foreign direct investment in the ASEAN. Government departments should offer ASEAN’s direct investment information fast and accurate. For the ASEAN’s exchange rate and inflation rate, the government should ensure there are sound monetary and fiscal policies to cushion exchange rate from constant fluctuations.
References


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