THE IMPACT OF CHINA ON ASEAN INTRA-REGIONAL TRADE

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ABSTRACT

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By

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Recently, ASEAN (Association of Southeast Asian Nations) has dramatically developed a strong intra-regional economic relationship by implementing the Preferential Trading Arrangement (PTA) and ASEAN Free Trade Area (AFTA) in the region. Consistent with this development, the emergence of China as an economic giant has successfully offered massive of potential for mostly export-oriented ASEAN members. By applying a modified gravity model, this study is intended to highlight the impact of China on ASEAN intra-regional trade. Pooled Ordinary Least Square (OLS) estimation and panel Granger causality test are adopted to test the degree of consequences brought by China on ASEAN countries. However, this study found that the most significant factor that determines the export trade between ASEAN countries is trade openness and the distance between both ASEAN trading countries.

Keywords: Intra-regional Trade, ASEAN (Association of Southeast Asian Nations), China, Gravity Model.
ABSTRAK

KESAN DARI CHINA PADA PERDAGANGAN INTRA-SERANTAU DI ASEAN

Oleh

Elwin Yap Boon Siang

Baru-baru ini, ASEAN (Association of Southeast Asian Nations) telah mengembangkan hubungan ekonomi yang kuat di kawasan intra-serantau dengan melaksanakan preferential Trading Arrangement (PTA) dan ASEAN Free Trade Area (AFTA) di kawasan-kawasan tersebut secara dramatik. Seiring dengan perkembangan ini, kemunculan China sebagai gergasi ekonomi telah berjaya menawarkan potensi besar bagi anggota ASEAN yang berorientasikan eksport. Dengan menerapkan model graviti yang diubahsuai, kajian ini bertujuan untuk mengkaji kesan China terhadap perdagangan intra-serantau di negara-negara ASEAN. Estimasi Pooled Ordinary Least Square (OLS) dan kajian panel Granger causality telah diadopsi untuk menguji tahap kesan yang dibawa oleh China pada negara-negara ASEAN. Namun, kajian ini mendapati bahawa faktor yang paling penting yang menentukan perdagangan eksport antara negara-negara ASEAN ialah keterbukaan perdagangan dan jarak di antara kedua-dua negara perdagangan ASEAN.

Kata-kata Kunci: Pedagangan Intra-serantau, ASEAN (Association of Southeast Asian Nations), China, Model Graviti.
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>TABLE OF CONTENTS</th>
<th>vii-ix</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLE</td>
<td>x</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>xi</td>
</tr>
</tbody>
</table>

## CHAPTER 1: INTRODUCTION 1-18

1.0 Background of study 1

1.1 ASEAN-5 Intra-regional Export Trade 2

1.2 The Proportion of ASEAN-5 in China Total Export 5

1.3 Problem of Statement 10

1.4 Objective of the Study 13
   1.4.1 General Objective 13
   1.4.2 Specific Objective 13

1.5 Significance of the Study 13

1.6 Theoretical Framework 15

1.7 Scope of the Study 17

## CHAPTER 2: LITERATURE REVIEW 18-35

2.0 Introduction 18

2.1 Related Studied on the trade relationship and the impact of China toward certain countries 18
CHAPTER 3: METHODOLOGY 35-47

3.0 Introduction 35
3.1 Research Design 35
3.2 Data Description 36
3.3 Model of Research 36
3.4 Panel Unit Root Test 39
   3.4.1 Levin and Lin (LL) Test 39
   3.4.2 The Im, Pesaran and Shin (IPS) Test 40
3.5 Panel Cointegration Tests 41
   3.5.1 The McCoskey and Kao Test 42
   3.5.2 The Larsson Et Al.Test 43
   3.5.3 The Pedroni Test 43
3.6 Ordinary Least Square (OLS) Estimation 45
3.7 Panel Granger Causality Test 46
3.8 Research Hypothesis 47

CHAPTER 4: FINDING AND DISCUSSION 48-57

4.0 Introduction 48
4.1 Panel Unit Root Result 48
4.2 Pooled Coefficient Test 50
4.4 Granger Causality Test 55
LIST OF TABLE

Table 1: China Total Export and ASEAN-5 in China Export, 1995-2009 7
Table 2: China Export Distribution toward ASEAN-5, 1995-2009 8
Table 3: Unit Root Test Result 49
Table 4: Pooled OLS estimation result 50
LIST OF FIGURE

Figure 1: ASEAN-5 Intra-regional Export Trade, 1995-2009 3
Figure 2: China Total Export, 1995-2009 7
Figure 3: ASEAN Proportion in China Total Export Flow, 1995-2009 8
Figure 4: China Export Distribution toward ASEAN-5, 1995-2009 9
Figure 5: ASEAN-5 Total Intra-regional Export Trade, 1995-2009 10
Figure 6: Factor that Potential to Affect ASEAN-5 Intra-regional Trade 15
Figure 7: Granger Causality Result 55
CHAPTER ONE
INTRODUCTION

1.0 Background of Study

In the past two decades, the process of globalization has notably changed the world to a new era. The advance in information technology and internet has increased the quality of production and eventually caused trade to be created among countries. At the same time, such an advance has shortened the distance between countries and simplified the trade procedure among the nations. The most obvious nation that has attracted worldwide attention in the past twenty years is what we know as the "economic giant"- China. The rapid growth and development of the People's Republic of China is what many nations are aware of in recent years. In such a flourishing condition, China can affect her neighbouring countries and also countries around the world either positively or negatively.

For the young ASEAN (Association of Southeast Asian Nations), the emergence of China has brought about a great challenge from many perspectives in terms of production quality, labour skill, foreign direct investment and production efficiency. In the past twenty years, bilateral trade flow between China and ASEAN has grown dramatically. In 2002, China and ASEAN had agreed to establish a free trade area called ASEAN-China Free Trade Agreement (ACFTA) in order to achieve a fully liberalized trade area between China and ASEAN countries in a period of 10 years. This agreement
enables the trade linkages between China and ASEAN countries to be released from trade restriction and to become closer. Therefore, how does the emergence of China bring opportunities and challenges to ASEAN countries? What are the benefits and challenges brought by China to ASEAN countries? It is critical and significant to have consideration on this great issue.

1.1 ASEAN-5 Intra-regional Export Trade

In the past two decades, ASEAN has been considered as a credible candidate toward many research topics in international economics and finance. ASEAN was officially established in 1967. The five member countries are Malaysia, Philippine, Singapore, Thailand and Indonesia. The main objective of the establishment is to accelerate regional economic, social and cultural development. At the same time, peace and stability through justice are also emphasized in the formation of ASEAN.
Figure 1 indicates the ASEAN-5 intra-regional export trade from 1995 to 2009. It is notable to know that Singapore exported the most to the rest of ASEAN-4 from 1995 to 2009. In 1995, Singapore exported US$33.80 billions to the ASEAN-4. This amount is inconsistent until 1997 and dropped to US$25.96 which was the lowest value within these 15 years due to the Asia financial crisis. From the year 2002 onward, Singapore export trade value grew consistently and achieved its peak at 2008. The value recorded in 2008 was US$97.05 billion. But this amount dropped again in 2009 and became US$72.16 billion. Among the ASEAN-5, Philippine exported the less to the other ASEAN-4. In 1995, the export value recorded was US$2.24 billion. Unlike the other ASEAN-4, this amount was never affected by the crisis in 1997 and 1998 as it grew consistently and achieved US$5.89 billions in 2000. Philippine achieved its high
peak by 2006 as its export value toward other ASEAN-4 was US$7.82 billion. Therefore, we can range Singapore as the top exporter among the ASEAN-5 because of its total export of US$767.70 billion in 15 years. The second belongs to Malaysia with its total export value of US$423.52 billion. Followed by the third is Thailand with its value of US$231.12 billions. The fourth is Indonesia with its total export value of US$189.63 billions. The fifth is Philippine as its total export value within these 15 years is only US$80.14 billions.

It is undeniable to state that ASEAN has significantly developed a strong intra-regional economic relationship by implementing the Preferential Trading Arrangement (PTA) and ASEAN Free Trade Area (AFTA) in the region. AFTA is carried out to develop a regional competitive advantage which covers economic efficiency and productivity in its member countries. All these policies has successfully increased the export in the past twenty years. According to the ASEAN Secretariat (2009), ASEAN intra-regional trade had increased from 20 percent to 25 percent in 2008. ASEAN leader reflected that the establishment of strong regional bloc was achievable by establishing a strong economic harmonization among the member countries (Salim and Kabir, 2009). Salim and Kabir (2009) indicated that EU is a role model of the most successful regional economic integration, and ASEAN is expected to have a potential prospect for the future successful regional cooperation.
1.2 The Proportion of ASEAN-5 in China Total Export

In this study, we adopted ASEAN-5 to represent the ten ASEAN countries. These countries namely Malaysia, Philippine, Thailand, Singapore and Indonesia are the 5 founded ASEAN countries. In 1995, China total export recorder was US$148.8 billion. This amount grew consistently and achieved US$1430.4 billion in 2008. The rate of growth was 861.32 percent. In other word, it was US$1281.6 billion. In the following, this amount dropped US$228.6 billion or 15.98 percent and achieved US$1201.9 billion.

Although China total export recorded a drop in 2009, it export proportion toward ASEAN-5 had never dropped. Based on the statistical information in the past eight years, it is found that the fluctuation of China total export to ASEAN-5 is inconsistent. In 1995, ASEAN took 6.05 percent of proportion in China total export. This percentage dropped 3.6 percent in the following year. In 1997, this amount grew 2.47 percent and recorded 5.98 percent out of the China total export. Due to the occurrence of financial crisis in 1997 and 1998, China experienced the biggest drop in export to ASEAN-5 between years 1995 to 2009. The export volume of China to ASEAN-5 in 1998 was only US$9.5 billion compared to the US$10.9 billion recorded in 1997. The decrease of the export volume in 1998 was 13.66 percent. In 2000, the export volume of China to ASEAN was raised to US$15.1 billion which was 6.06 percent out of the China total export in that particular year. In 2001, 2002 and 2003, China export volume to ASEAN-5 was decreased 2.15 percent, increased 5.62 percent and decreased 3.74 percent respectively. Starting from 2003, the proportion of ASEAN-5 taking part in China total export grew
increasingly to 19.18 percent and was 7.18 percent of China total export. The detail of China total export and ASEAN-5 proportion flow are shown in figure 1 and figure 2.

Among ASEAN-5, China exported the most to Singapore throughout the period from 1995 to 2009. Singapore took the largest part in China total export in almost every year. In 1996, 42.52 percent of export from China among the ASEAN-5 was came from Singapore. It export value was US$3.78 billion. In 2008, China exported US$32.31 billion to Singapore which was the greatest value within those 15 years. Among the ASEAN-5, Philippine took the smallest proportion from 1995 to 2009 except for 1998. The smallest proportion in 1998 was Malaysia which was 12.34 percent. This was the smallest proportion for Malaysia during those years. Philippine recorded 15.95 percent which was also the largest proportion during those 15 years of period.
Table 1: China Total Export and ASEAN-5 in China Export, 1995-2009.

<table>
<thead>
<tr>
<th>Year</th>
<th>China Total Export (US$ billions)</th>
<th>China Export to ASEAN-5 (US$ billions)</th>
<th>Percentage Proportion</th>
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<tr>
<td>1995</td>
<td>148.8</td>
<td>9.00</td>
<td>6.05</td>
</tr>
<tr>
<td>1996</td>
<td>151.2</td>
<td>8.82</td>
<td>5.83</td>
</tr>
<tr>
<td>1997</td>
<td>182.8</td>
<td>10.93</td>
<td>5.98</td>
</tr>
<tr>
<td>1998</td>
<td>183.7</td>
<td>9.48</td>
<td>5.16</td>
</tr>
<tr>
<td>1999</td>
<td>195.2</td>
<td>10.77</td>
<td>5.52</td>
</tr>
<tr>
<td>2000</td>
<td>249.2</td>
<td>15.10</td>
<td>6.06</td>
</tr>
<tr>
<td>2001</td>
<td>266.7</td>
<td>15.80</td>
<td>5.93</td>
</tr>
<tr>
<td>2002</td>
<td>325.6</td>
<td>20.38</td>
<td>6.26</td>
</tr>
<tr>
<td>2003</td>
<td>438.2</td>
<td>26.41</td>
<td>6.03</td>
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<td>2004</td>
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<td>37.10</td>
<td>6.25</td>
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<td>2005</td>
<td>761.9</td>
<td>48.10</td>
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</tr>
<tr>
<td>2006</td>
<td>968.9</td>
<td>61.67</td>
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<tr>
<td>2007</td>
<td>1218.3</td>
<td>79.95</td>
<td>6.56</td>
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<td>2008</td>
<td>1430.4</td>
<td>95.72</td>
<td>6.69</td>
</tr>
<tr>
<td>2009</td>
<td>1201.9</td>
<td>86.31</td>
<td>7.18</td>
</tr>
</tbody>
</table>

(Source: UN Comtrade Database, obtained 2010)

Figure 2: China Total Export, 1995-2009.

(Source: UN Comtrade Database, obtained 2010)
Figure 3: ASEAN Proportion in China Total Export Flow, 1995-2009.

Table 2: China Export Distribution toward ASEAN-5, 1995-2009.

<table>
<thead>
<tr>
<th>Year</th>
<th>Singapore (US$ billions)</th>
<th>Indonesia (US$ billions)</th>
<th>Malaysia (US$ billions)</th>
<th>Thailand (US$ billions)</th>
<th>Philippine (US$ billions)</th>
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<td>%</td>
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<td>1995</td>
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<td>1997</td>
<td>4.32</td>
<td>39.57</td>
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<td>16.85</td>
<td>1.92</td>
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<td>1998</td>
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<td>1.17</td>
<td>12.34</td>
<td>1.60</td>
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<td>1999</td>
<td>4.50</td>
<td>41.81</td>
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<td>2000</td>
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<td>38.16</td>
<td>3.06</td>
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<td>2001</td>
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<td>36.64</td>
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<tr>
<td>2002</td>
<td>6.98</td>
<td>34.26</td>
<td>3.43</td>
<td>16.81</td>
<td>4.97</td>
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<tr>
<td>2004</td>
<td>12.69</td>
<td>34.20</td>
<td>6.26</td>
<td>16.86</td>
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<tr>
<td>2005</td>
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<td>34.58</td>
<td>8.35</td>
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<td>2007</td>
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<td>37.46</td>
<td>12.70</td>
<td>15.88</td>
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<td>2008</td>
<td>32.31</td>
<td>33.75</td>
<td>17.19</td>
<td>17.96</td>
<td>21.46</td>
</tr>
<tr>
<td>2009</td>
<td>30.07</td>
<td>34.84</td>
<td>14.72</td>
<td>17.06</td>
<td>19.63</td>
</tr>
</tbody>
</table>

(Source: UN Comtrade Database, obtained 2010)
Figure 4: China Export Distribution toward ASEAN-5, 1995-2009.

(Source: UN Comtrade Database, obtained 2010)
1.3 Problem Statement

The emergence of China has notably influenced the trade pattern in almost every nation in the world. It is considered that ASEAN intra-trade pattern is mostly affected by the emergence of China. In fact, ASEAN member countries, the largest and the only regional trade arrangement (RTA) in Southeast Asia, have been experiencing much of trade liberalization compared to the time when ASEAN was established. ASEAN Free trade Area (AFTA) was officially established in 1992 in order to enhance ASEAN member countries comparative advantages as a single production unit (Lau, 2005).

Figure 5: ASEAN-5 Total Intra-regional Export Trade, 1995-2009.

(Source: UN Comtrade Database, obtained 2010)
Figure 4 indicates the total intra-export trade among ASEAN-5 from 1995 to 2009. It is found that the fluctuation of the total intra-export trade among ASEAN-5 was inconsistent. In 1995, ASEAN-5 intra-regional export trade was US$72.32 billion. This amount dropped 18.11 percent in the following year and achieved US$63.28 billion. From this amount, ASEAN-5 total intra-regional export trade started to grow and achieved US$90.60 billion by 2000. In 2001, ASEAN-5 total intra-regional export trade dropped 13.70 percent and achieved US$78.19 billion. From year 2002 onward, this amount grew steadily and achieved US$206.16 billion which was the highest peak during that period. The growth rate in 2008 compared to the amount recorded in 2001 was 163.68 percent. But in 2009, this amount experienced a huge drop to 22.12 percent and achieved US$160.56 billion.

There are many arguments according to the previous studies done by certain researchers in order to examine the determinant of the trade pattern of ASEAN member countries. In February of 1997, ASEAN member countries experienced a huge setback and loss from the Southeast Asia financial crisis. Yi (2005) stated that one of the factors that caused ASEAN countries to suffer from the crisis was the weak intra-regional economic interdependence. Therefore, when the external demand from other countries declined, the intra-regional demand was unable to afford in absorbing the proportion of the product diverted from the exportation. This would eventually result in the collapse of both national and regional economy (Yi, 2005).
Trend flow in intra-regional trade suggests the ability of the ASEAN member countries as a trade-potential candidate for a regional bloc in Asia (Batra, 2006). Petri (1992) stated that the growth in intra-regional trade would increase the interdependence but it would not result in any form of bias toward regionalization especially the growth of income. The fluctuation of national income would directly and indirectly affect the intra-regional trade between groups of countries. Consistent with the rapid increase of China export into ASEAN-5, this paper is intended to examine the significant determinants that influence the intra-regional trade pattern among ASEAN-5 member countries. It is undeniable to state that some researchers have carried out the study on ASEAN trade pattern such as Hapsari and Mangusong (2006), Zhang (2006), Batra (2006) and Lau (2005). But these previous studies are unable and incomprehensive to cover the current ASEAN countries situation. It is important to admit that the trend of ASEAN intra-regional trade pattern has been changing since year 2009. It showed a downturn in it total export trade due to the many internal and external reasons. Therefore, it is significant to know the reasons that cause this scenario.
1.4 Objective of the Study

1.4.1 General Objective

The general objective of this study is to investigate the impact of the emergence of China on intra-regional trade among ASEAN-5, which are Malaysia, Philippine, Thailand, Indonesia, and Singapore.

1.4.2 Specific Objective

The specific objectives of this study are as below:

I. To differentiate the impact of China export on ASEAN-5 intra-regional trade.

II. To identify the most significant factor that influences ASEAN-5 intra-regional trade.

1.5 Significance of the Study

It was found that China rapid growth after 1978 has notably influences the regional institution and economic structure of its trading partner in around the world. China accession into WTO (World Trade Organization) has undoubtedly caught the attention of the world. In November of 2000, China and the leaders of ASEAN had decided to widen and deepen the process of economic, trade co-operation and
integration in Singapore. In the following year, a free trade agreement called ASEAN-China Free Trade Agreement was proposed in order to strengthen the trade liberalization in ten years under the "early harvest" program.

In the following ten year, it is obvious to state that the bilateral trade between China and ASEAN is becoming more integrated compared to last ten year. It is never too much to indicate that the increase of production level, production quality and standard, labour skill and the level of efficiency had directly and indirectly compete in ASEAN countries. This scenario does not only affect the demand of the ASEAN countries but also the trade among each another. Therefore, intra-regional trade among certain countries especially ASEAN countries is much concerned by public in the past two decades.

The intention of this study is to identify the impact of emergence of China toward ASEAN-5 intra-regional trade from the observed years. It is important to know the level of significance of China toward ASEAN countries so that ASEAN countries are able to differentiate the position of China toward their own country and to determine whether China is a hard competitor or a soft trading partner. Intra-regional trade between ASEAN countries is critical in developing ASEAN countries economic condition. The continuous inflow of China import would harm the development of economy in ASEAN countries. By carrying out this study, policy makers are able to understand these issues and try to carry out the proper policy to balance and improve the international trade condition for their country.
1.6 Theoretical Framework

Figure 6 indicates the relationship between the dependent variable and independent variables. We carried out this study by applying the modified gravity model. The dependent variable is the total export volume between pair of selected ASEAN member countries. Based on the previous studies done by Paas and Tafemau (2005), Bun and Klaassen (2002), Zarzoso and Lehmann (2002), Rahman (2003), and

PCGAP-Gross Domestic Product (GDP) Per Capital Gap
CEER-Common Effective Exchange Rate
TO-Trade Openness
CF-Cross Fixed Capital Formation

Figure 6: Factor that Potential to Affect ASEAN-5 Intra-regional Trade.