ASEAN-China Free Trade Agreement: It's Peace-Promotion Effects over South China Sea Dispute and Econometric Analysis of Welfare Effects on Not-Yet-Ready ASEAN members: Carbodia, Laos, Myanmar and Vietnam

[Roni Bhowmik]

Abstract— **This paper selects one of the specific examples of free trade agreement in East Asia. This agreement is the world's largest FTA in the developing world and is the third largest FTA in the world in terms of nominal GDP of about 6 trillion dollars and the world's largest one in terms of population of about 1.9 billion people. Due to the country specific disparity among ASEAN members, the trade barrier reductions have been done only between China and six ASEAN old members until the other 4 ASEAN members are ready to join the ACFTA in 2015. In this paper analyze the ACFTA to clarify its trade creation and trade diversion effects on Cambodia, Vietnam, Laos, and Myanmar (CLVM), which is not yet, realized the benefits of barrier reduction from China since 2010 until 2015.**

I. Introduction

Encouraged by its various benefits such as underpinning domestic policy reform, achieving firmer market access with large trading partners, linking between trade agreement and strengthened security arrangement, obtaining bargaining power in multilateral trade negotiation, and using regional negotiation as a threat to driving multilateral negotiation forward (Whalley, 1998), countries around the world seek regional trade agreement.

Since the early 1990s, regional trade agreements (RTAs) have been growing drastically. Some 575 RTAs have been notified to World Trade Organization (WTO), while 379 were in force as of 31 July (WTO, 2013). In terms of nominal GDP, European Union (EU), formerly called European Economic Community (EEC) established in 1958, is the largest free trade area, following by the North America Free Trade Agreement (NAFTA) in 1994. In 2010, the third largest free trade area came into effect in the East of the world. With a total GDP of almost 6 trillion US dollars and trade volume worth around 4.5 trillion dollars, ASEAN-China free trade area forms an economic bloc of 1.9 billion people, making it be the largest free trade area in terms of population (Xinhua, 2009).

ASEAN and People Republic of China (P.R.C) have come across two important milestones. Firstly, from 1960s to 1990s, they were political foes of two opposing ideologies: communism and capitalism. Beside the written aims of intra-regional economic growth and political stability in ASEAN Declaration, the other significant and unwritten aim of the

establishment of ASEAN in 1967 was to prevent from and fight with communism ideology's diffusion in the region. The five ASEAN co-founders: Indonesia, Thailand, Malaysia, Singapore, and Philippine, who were political allies of United States, considered China as their huge ideological enemy. In 1975, ASEAN was getting more concerned when the whole Indo-China: Vietnam, Cambodia, and Lao all became communist countries like China.

Secondly, from the early 1990s till present, ASEAN and China have met the win-win political and economic relation when China started its cooperation dialogue with United States and its economic and political reform in 1980s. After cold war, ASEAN started to grant memberships to other former enemies such as Vietnam, Lao, Myanmar and Cambodia. ASEAN stops consider China as a dangerous country anymore; further, ASEAN has recognized and supported the One-China policy. Both have made a number of bilateral and regional trades and investments since 1991. In 2010, the trade volume between China and ASEAN increased 36 times in the past two decades (An, 2011).

II. ASEAN-China Free Trade Agreement

To gain mutual trusts, interests and regional stability and prosperity, both leaders have come with huge willing and efforts to make cooperation. China and ASEAN began their cooperation dialogue in 1991. In 1997, they both issued a joint declaration of the establishment of guideline and common policies to link both sides at the first China-ASEAN summit in Kuala Lumpur. On November 4th, 2002, both historically signed in Phnom Penh the umbrella agreement called Framework Agreement on Comprehensive Economic Cooperation (FACEC), with the aim of establishing a common free trade area (FTA) by 2010.

On January 1st, 2010, China and ASEAN achieved its goal of kicking off their ASEAN-China free trade area (ACFTA). Under the ACFTA, the bilateral trade volume between ASEAN and China already exceeded 400 billion USD in 2012 and the bilateral investment volume reached 100 billion USD at the end 2012 (Rui, 2013). In recent years, China has been buying/importing ASEAN's products worth of 141,554.3 million USD (ASEAN statistics, 2013) in order to improve the business and trade relationship with ASEAN's countries so ASEAN's economies have met the fast growth.

For investment, China, in 2011, has flowed into ASEAN its foreign direct investment (FDI) of 6 billion USD, which is 9 times more than 2007 inflow FDI. ASEAN members states

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together also have flowed back to China its FDI worth of 7 billion USD in 2011, almost twice of 2007's. China is the fourth largest investor in ASEAN; while ASEAN, in turn, is China's third largest source of FDI. Mutual cumulative investment stood at approximate $110 billion as of the end of August 2013 (Li, 2013). In this bilateral trade, both sides promised to meet the trade volume of 500 billion USD by 2015. In 2012, bilateral trade volume surged 400.1 billion USD, 7.3 times as much as that of 2002 (Lu, 2013a).

Motivated by this economic growth, China and ASEAN plan to deepen its upgraded version of CAFTA by extending its scope and content, which was first proposed by Chinese Premier Li Keqiang. Premier Li said that China will strive to extend bilateral trade volume to 1 trillion USD by 2020 and increase two-way investment by 150 billion USD in the next eight years (Yang, 2013).

III.   Literature Review and Research Hypothesis

Researchers have contrasting arguments over the effect of free trade agreements. Some explained that a number of wars in the history rooted and evolved out of trade disputes. Wallerstein (1974) and Emmanuel (1972) theoretically argued that asymmetric economic interdependence may cause negative consequences in a country such as exploiting concession and threatening national autonomy, thereby, as explained by Dos Santos (1970) and Keohane and Nye (1973), establishing interstate tensioins and conflicts.

Wong and Chan (2002) point out that China will pose a greater competitive threat to ASEAN as it moves from labor-intensive product to capital-intensive and technology-intensive product manufacture. However, Lijun (2003) who conducted a political study of the origins, development and motivations on the Chinese side of the FTA explained that if ACFTA is carried out with careful calculation and good cooperation, can bring about more benefits than losses to both sides. Otherwise, there will be losses where there shouldn't be. Tongzon (2005) qualitatively explained that China's export structure is similar in many respects to the ASEAN countries'. China's top exports accounting for about 84 percent of its total exports (i.e. apparel and textiles, footwear, chemicals, machinery and appliances, miscellaneous manufactures, vegetable products, base metal and metal products and mineral products) are also ASEAN's major exports, although the order of importance varies from country to country.

Empirical researchers have also studied the impact of free trade agreement which leads to trade interdependence on the probability of military conflict between trading partners. It is empirically showed that the more the bilateral trade volume is, the less the frequency of military conflict is (Polachek, 1980 and Polachek, Robst, and Chang, 1999), whereas Barbieri (1996) and Barbieri & Schneider (1999) found that a measure of bilateral trade interdependence has a positive impact on military conflict. In contrast, the later studies showed that with the use of a different measure of bilateral trade interdependence, that trade interdependence appears to reduce military conflict (Oneal and Russett, 1999; Mansfield and

Pevenhouse, 2000; and Gartzke and Li, 2003). Another empirical study finds that only deep RTAs such as custom unions and common markets reduce the likihood of conflict while shallow RTAs such as Partial scope and free trade agreement have no effect on the conflict (Vicard, 2012).

However, not many empirical studies have been conducted to assess the impact of ACFTA. Chirathivat (2002) finds net gains in trade, real GDP and welfare for both ASEAN and China. Lee and Mensbrugghe (2007) and Kawai and Wignaraja (2008) also empirically support that ACFTA provides welfare gains for its members. Park et al. (2009) use qualitative custom union approach and quantitative computable general equilibrium model to find country-specific effects of ACFTA. They find that although integration brings about net trade, output and welfare gains for the region as whole, country-specific effects of ACFTA vary considerably.

1.   Distance:

Hypothesis 1: The smaller is the distance between trading partners, the higher the probability of ASEAN-China Free Trade Agreement is.

2.   Remoteness:

Hypothesis 2: The more remote from the rest of the world (ROW) the two trading partners are, the higher the likelihood of ASEAN-China Free Trade Agreement is.

3.   Economic Size:

Hypothesis 3: The larger their economic sizes (i.e. average real GDPs) are, the higher the likelihood of ASEAN-China Free Trade Agreement is.

Hypothesis 4: The more similar their economic sizes are, the higher the probability of a FTA between ASEAN and China.

4.   Relative Factor Endowment (Capital-Labor Endowment):

Hypothesis 5: The larger enough the difference in capital-labor endowment ratios between country pairs is, the higher the likelihood of a FTA is.

5.   Interdependence Effect:

Hypothesis 6: The larger the number of FTAs already present in the neighborhood is, the higher the likelihood of FTA between ASEAN-China is.
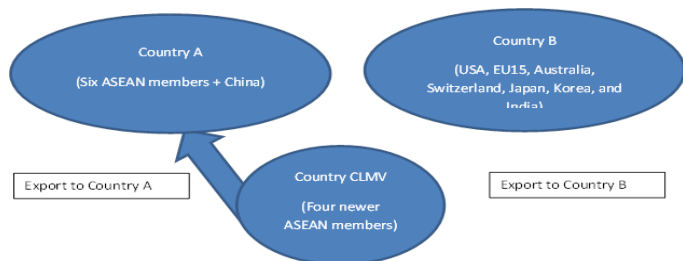
6.   Governance:

Hypothesis 7: The better the governance structure the country pairs have, the higher the probability of FTA between ASEAN and China

7.   Vertical Specialization:

Hypothesis 8: The greater degrees of vertical specialization are, the higher likelihood of a trade agreement is being concluded.

IV. **Methodology**

To determine the trade creation or trade diversion effects of the ACFTA on the rest of the world, I use the 2007 six-digit HS product classification in the analysis. The basic idea is captured in a schematic trade flows diagram (see Figure above). I assume six ASEAN members (Indonesia, Malaysia, Singapore, Thailand, Brunei and the Philippine) and China, (the ACFTA partners as 'country A') as our key countries.

I seek to assess the trade diversion or trade creation effects of ACFTA on the rest ASEAN members: CLMV (Cambodia, Laos, Myanmar and Vietnam) by comparing the exports from the newer four ASEAN members (control country CLMV) to the current ACFTA partners (country A) and to some other country (country B). The choice of the control country, CLMV, is such that country A and country B both trade with country CLMV on an MFN basis during the study period. The choice of country B is based on two main considerations: its detailed trade data should be available electronically and it should have significant trade with both the key countries (i.e. six older ASEAN members and China).

Some of the countries fulfilling these criteria for country B are: the USA, the European Union (EU15), Australia, Switzerland, Japan, Korea and India. These countries are taken as country B in seven different panels. The central objective is to identify the difference in two exporting patterns after the effectiveness of ACFTA since 2010.

In Section iv, first I take the USA as 'country B' because it engages in substantial trade with most of the control countries, CLMV with no significant change in preferential trade relations with these countries during the study period (2010–2015). The control countries, CLMV, are the rest of ASEAN members who have not changed their preferential trade relations substantially with China during 2010 to 2012. I chose the control countries: Cambodia, Laos, Myanmar and Vietnam from the list of 180 countries supplying data to UN Comtrade database. I combined six ASEAN countries (Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore, and Thailand) that have effective trade barrier reduction with China as key countries. Furthermore, I dropped the European Union, as the individual member countries of the European Union are already covered in our list. In short, the country A consists of six ASEAN old member and China, country B consists of the USA, EU, Australia, Switzerland, Japan, Korea, and India; and the control countries CLMV are Cambodia, Laos, Myanmar and Vietnam during the study period.

I use the commodity and time variation in the tariff preferences allowed under ACFTA to identify the ACFTA's effect on sourcing of commodities from a non-ACFTA country, CLMV (control countries), to ACFTA partners (country A) and USA (country B). In contrast, for the goods where the ACFTA does not offer preference (i.e. when the MFN tariff rates are almost zero), the impact of ACFTA comes through the 'border effects' that goes beyond the agreed trade liberalization under FTA, as is evident from the increased volumes of commodities on the ACFTA negative list.

V. **Theoretical Framework, Model and Data Description**

A. *Theoretical Framework and Empirical Model*

In line with Romalis (2005), I briefly outline the model. In this model, the firms are assumed to produce goods under perfect competition. Trade is assumed to be driven by varieties and the commodities are differentiated by their source of origin. In every period t, consumers in each country c are assumed to maximize Cobb–Douglas utilities of their consumption of the output of each industry $Q_{ct}(z)$, with the fraction of income spent on industry z being $b_c(z)$. The utilities for consumers in country C are:

$$U_{ct} = \int_0^1 b_c(z) \ln Q_{ct}(z) dz \quad (1)$$

$$\int_0^1 b_c(z) dz = 1 \quad (2)$$

The outputs of a country's firms are identical products, but different countries produce different products in the same industry. $Q_{ct}(z)$ can be interpreted as a sub-utility function that depends on the quantity of each variety of z consumed. $Q_{ct}(z)$ is defined as:

$$Q_{ct(Z)} = \left(\sum_{CLMV}^{N} q_{ct}^D (z_{CLMV})^{\frac{\sigma_z - 1}{\sigma_z}} \right)^{\frac{\sigma_z}{\sigma_z - 1}} \quad (3)$$

Where elasticity of substitutions $\sigma_z > 1$ and $q_{ct}^D(z_{CLMV})$ denote the quantity consumed in country c of commodity z produced in country *CLMV*.

The demand function country c, for a commodity z from country *CLMV*, $q_{ct}^D(z_{CLMV})$, is assumed to be a constant elasticity of substitution (CES) function. The demand (z_{CLMV}) is assumed to depend on seven variables: $a_t(q_t^s(z_{CLMV}))$, the marginal cost of production of commodity in country *CLMV*; $\tau_{ct}(z_{CLMV}) - 1$, the ad-valorem tariff imposed on z from CLMV by country c, $g_{ct}(z_{CLMV})$, the transport costs for international trade; $\hat{P}_{CLMV}$, the ideal price index for commodity z in country C, Y_{ct}, the GDP of country C; $b_c(z)$, the expenditure weights in the utility functions for country C, which is the

consumptions in country C of each HS six-digit product (regardless of source) divided by the GDP of country C; and the mean elasticity of demand, σ, as per the following log-linear equation:

$$\ln q_{ct}^D(z_{CLMV}) = -\sigma \ln a_t(z_{CLMV}) - \sigma \ln \tau_{ct}(z_{CLMV}) - \sigma \ln g_{ct}(z_{CLMV}) + (\sigma - 1)\ln \hat{p}_{CLMV} + \ln b_c(z_{CLMV})Y_{ct}$$

(4)

where $\hat{P}_{CLMV}$, the ideal price index for commodity z in country C is defined as:

$$\hat{P}_{CLMV} = \left[\sum_{CLMV}(a_t g_{ct}\tau_{ct}(z_{CLMV}))^{1-\sigma}\right]^{\frac{1}{1-\sigma}}$$

(5)

The transport costs for international trade are assumed to be in the 'iceberg' form; that is, $q_{ct}^D(z_{CLMV})$ units must be shipped from countries CLMV for 1 unit to arrive in countries C.

If I denote country C in Equation (4) as 'country A' (say both ACFTA countries together), the demand function for 'country A' for commodity z from country CLMV (non-ACFTA country from 2010-2015) becomes:

$$\ln q_{At}^D(z_{CLMV}) = -\sigma \ln a_t(z_{CLMV}) - \sigma \ln \tau_{At}(z_{CLMV}) - \sigma \ln g_{At}(z_{CLMV}) + (\sigma - 1)\ln \hat{p}_{CLMV} + \ln b_A(z_{CLMV})Y_{At}$$

(6)

I have a similar log-linear CES demand function for 'country B' (say USA) for commodity Z from country *CLMV* (non-ACFTA countries from 2010-2015):

$$\ln q_{Bt}^D(z_{CLMV}) = -\sigma \ln a_t(z_{CLMV}) - \sigma \ln \tau_{Bt}(z_{CLMV}) - \sigma \ln g_{Bt}(z_{CLMV}) + (\sigma - 1)\ln \hat{p}_{CLMV} + \ln b_B(z_{CLMV})Y_{Bt}$$

(7)

By combining Equation (6) and (7), I can compare the value of exports of commodity z from countries CLMV (non-ACFTA to countries A (ACFTA region) and to countries B (USA), grossed up for transport costs and tariffs:

$$\ln \frac{a_t g_{At}\tau_{At}q_{At}^D(z_{CLMV})}{a_t g_{Bt}\tau_{Bt}q_{Bt}^D(z_{CLMV})} = -(\sigma - 1)\ln \frac{\tau_{At}(z_{CLMV})}{\tau_{Bt}(z_{CLMV})} - (\sigma - 1)\ln \frac{g_{At}(z_{CLMV})}{g_{Bt}(z_{CLMV})} + (\sigma - 1)\ln \frac{\hat{P}_{Atz}}{\hat{P}_{Btz}} + \ln \frac{b_A(z)Y_{At}}{b_B(z)Y_{Bt}}$$

(8)

This helps me to get rid of $a_t\left(q_t^s(z_{CLMV})\right)$ the marginal cost of production of commodity in country c, which I do not know.

Trade creation for the CLMV might result from ACFTA because tariff reductions among partners directly lower $\hat{P}_{Atz}$ in the ACFTA region (country A) because one of the members of the ACFTA would ultimately displace the higher cost domestic producers of commodity z in the other partner country. As a result, the consumers in the ACFTA region (country A) will have more income to buy goods from the non-ACFTA country *CLMV*. The exports of non-FTA country CLMV to the ACFTA region will increase resulting in trade creation for the rest of the world.

In contrary, it is possible that due to preferential tariffs, a partner country's production might displace the lower cost suppliers from non-ACFTA country *CLMV* in the ACFTA region (country A). Trade diversion for the rest of ASEAN countries, *CLMV* might result because tariff reductions on FTA partners' output directly lower $\hat{P}_{Atz}$ thereby depressing exports from other countries, CLMV, to six ASEAN older members and China.

B. *Data Description*

Since the CLMV are expected to be ready to join the ACFTA in 2015, the period of the study of the impact of ACFTA is from 2010 to 2015 (i.e. that is, 5 years before ACFTA) applying six-digit HS 2007. Generally, I use two kinds of data: tariff and trade data. The important sources of data are TRAINS (by UNCTAD) for tariff data and COMTRADE (by UNSD) for international trade data. These sources of data are under the Global Trade Information (GTI) Service Global Trade Atlas (GTA).

Tariff Data: The tariff data of all ASEAN China Free Trade Agreement's members both the older such as six ASEAN older members and the newer such as CLMV are collected from TRAINS database under WITS since it contains information on imports, tariffs, and non-tariff measures (NTMs) using the HS nomenclature. The earliest data is from 1988.

Data from 2010 to 2012 is based on HS 2007 classification and that from 2012 to 2015 is based on HS 2012. Since the data for year 2010 to 2010 is available from HS 2007, I will use WITS concordance table to convert data from HS 2012 to HS 2007.

International Trade Data: Trade data for all countries are taken from the UN Comtrade database, while import tariff data are drawn from the official commitments by each country to ACFTA. UN Comtrade database contains (1) annual trade-flow information covering gross imports, gross exports, re-imports and re-exports since 1962 and (2) trade value and quantity by product category in SITC since 1962 and in HS since 1988.

Because these data are in some cases drawn from different HS classifications, for each ASEAN country and for China I established a concordance between tariff data and trade data.

VI. Conclusions and Policy Suggestions

"Friendship is always changing; today friend can be tomorrow enemy and today enemy can be tomorrow friend"
Zhuge Liang (181-234 AD)

Free trade agreements vary widely but all have the objective of reducing trade barriers between member countries, which implies discrimination in trade with non-member countries. At their simplest, these agreements merely remove tariffs on intra-bloc trade in goods, but many go beyond this to cover non-tariff barriers and to extend liberalization to investment and other policies. In contrast, others have the goal of economic union and involve construction of shared executive, judicial and legislative institutions. Many factors, some explicitly stated and others not so publicly admitted, have been responsible for the recent spurt in regionalism.

The main contribution of this paper is to analyze the strategies of the ACFTA to clarify its trade creation and trade diversion effects on ASEAN members, which are not yet realized the benefits of barrier reduction from China since 2010 until 2015. The idea is that when an FTA results in preferential treatment for the ASEAN's goods, the consumers in China tend to substitute the preferential goods for goods from other sources (including domestic production). Similarly, the ASEAN consumer will substitute goods of China origin if they have preferential treatment compared to goods from the rest of the trading partners.

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