
LANGUAGE IN INDIA

Strength for Today and Bright Hope for Tomorrow

Volume 14:1 January 2014
ISSN 1930-2940

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Prospects of Emerging Comprehensive Economic Cooperation Agreement between India and Thailand

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Abstract

In this study, the authors try to examine India's Comprehensive Economic Cooperation Agreement (CECA) with Thailand. This is an inquiry about Indo-Thailand bilateral trade relations. Time series data for the period between 1997 and 2012 has been taken for the analysis. Here the authors use the well-known Gravity model for sixteen year data analysis. This technique proved to be successful in explaining India's bilateral trade flows to Thailand. The analysis reveals that GDP

Language in India www.languageinindia.com ISSN 1930-2940 14:1 January 2014

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and Population positively influence trade volume, while distance (dummy) variable shows a negative relationship towards bilateral trade. This paper concludes that India and Thailand have greater unrealized trade potential which can be realized through comprehensive economic cooperation.

Introduction

India and Thailand have a long history of cultural affinity. The geographical proximity between these two countries, commercial interest and various other issues initiate interest to study the bilateral trade between the two countries. As these two countries become independent during the mid-20th century, both have to strengthen their economies. The best way to do that is to go for successful international trade. Hence the authors have shown interest in studying the trade relation between these two countries.

A Brief note on Free Trade Agreements (FTAs)

Free Trade Agreements (FTAs) play a significant role in reducing the trade barriers between different nations. Generally, FTAs have aimed at the reduction of tariff and non-tariff barriers and the creation of a more stable and transparent trading and investment environment among nations. Increasing integration of economies, primarily through trade relations, is getting accelerated through FTAs.

The role of FTA has accelerated during the period after the World War II. (Cherunilam, 2010).¹ It can be said that FTA was propagated among the Developing Countries (DC) to overcome the economic problems they face. This

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technique was followed by Less Developed Countries (LDC) in the East Asia to ward off economic difficulties. Hence FTA becomes a more popular method of Economic Development.

Further extending the FTA, many countries in Asia and the Pacific go in for another method of extended trade called Comprehensive Economic Co-operation Agreement (CECA). In the next paragraph we show how CECA between India and Thailand came into existence.

Comprehensive Economic Cooperation Agreement (CECA) between India and Thailand

In November 2001, the Prime Minister of Thailand, Dr. Thaksin Shinawatra and the Prime Minister of India had agreed to set up a Joint Working Group (JWG) to undertake feasibility study of a Free Trade Agreement (FTA) between India and Thailand. The JWG had observed that the policy regimes in both the countries were conducive to more intensive bilateral economic integration and a FTA could prove to be a building block for other sub-regional, regional and global economic integration processes of which both countries are a part. Having observed rich potential for trade expansion, the JWG concluded that the proposed FTA between India and Thailand is feasible, desirable and mutually beneficial. Accordingly, a Joint Negotiating Group (JNG) was set up to draft the Framework Agreement on India - Thailand FTA.

FTA between India and Thailand

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The Framework Agreement covers FTA in Goods, Services and Investment and other areas of Economic Cooperation. The Framework Agreement also provided for an Early Harvest Scheme (EHS) for elimination of tariff on a fast track basis on 82 items of export interest to both the sides. The tariff concessions on 82 items of EHS list began from September 2004 and have become zero for both sides from September 2006. The India-Thailand Trade Negotiating Committee (TNC) has been constituted to negotiate a comprehensive FTA covering Trade in Goods, Trade in Services, Investment, Rules of Origin, and Dispute Settlement Mechanism. This has led to the development of CECA.

Based on above the authors of this article tend to believe that the CECA agreement has improved the trade relation between the two countries. For this objective, the authors have made a hypothesis that Comprehensive Economic Cooperation (CECA) increases the trade relation between India and Thailand.

Methodology

This study analyzes the trade relation between India and Thailand. The data has been collected from the aftermath of the Asian Financial Crisis. To be more precise, the data was collected from 1997 to 2012. Here Gravity model was used to analyze the trade relation.

“It has been known since the seminal work of Jan Tinbergen (1962) that the size of bilateral trade flows between any two countries can be approximated by a law called the “gravity equation” by analogy with the Newtonian theory of gravitation. Just as planets are mutually attracted in proportion to their sizes and proximity, countries trade in proportion to their respective GDPs and proximity”.³

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Sixteen year time series data between 1997 and 2012 has been taken from different sources. Annual data on India's Export is taken from Department of Commerce Export Import data bank. Annual data on Gross Domestic Product (GDP) is taken to measure the economic size of the economy. Annual data on population of both the countries from World Bank Group and data on distance from www.distancefromto.net were also used.

Newton's law of gravitational force states that: "Every particle of matter in the universe attracts every other particle with a force that is directly proportional to the product of masses of the particles and inversely proportional to the square of the distance between them." That is:

$$GF_{ij} = GM_iM_j / D^2_{ij} \text{-----} (1)$$

Where GF_{ij} is the Force of gravity between the two particles; G is the gravitational constant for converting proportionality into equality; M_iM_j is the product of masses of the two particles; D^2_{ij} is the square of straight- line distance between the two particles.

The gravity equation derived from Newton's Law of Gravity represented by equation (2) is as follows:

$$TR_{ij} = \alpha M_iM_j / DTS_{ij} \text{-----} (2)$$

Where TR_{ij} is the trade volume between countries i and j in a particular year; α is the constant for converting proportionality into equality; $M_i M_j$ is the product of the masses of the two countries i and j ; DST_{ij} is the geographical distance between the two countries i and j .

In order to make it conform to usual regression analysis, equation (2) is usually converted into its linear form:

$$\log(TR_{ij}) = \alpha + \gamma_1 \log(M_i M_j) + \gamma_2 \log(DST_{ij}) + \mu_{ij} \text{-----}(3)$$

Masses of the economies can be represented by alternative variables which include Gross Domestic Product (GDP), population (Pop) and Distance (Dis).

The standardized form of gravity equations such as Pooled model equation (4) and Fixed Effect equation (5) employed in the current study is:

$$\log(X_{it}) = \beta_0 + \beta_1 \log(gdp_i) + \beta_2 \log(gdp_t) + \beta_3 \log(Pop_i) + \beta_4 \log(Pop_t) + \log(Dis_{it}) + \varepsilon_{it} \text{-----}(4)$$

$$\log(X_{it}) = \beta_0 + \beta_1 \log(gdp_i) + \beta_2 \log(gdp_t) + \beta_3 \log(Pop_i) + \beta_4 \log(Pop_t) + \varepsilon_{it} \text{-----}(5)$$

Where β_0 stands for the constant of proportionality; $\beta_1, \beta_2, \beta_3$ and β_4 refer to coefficients to be estimated; $\log(X_{it})$ is the natural log of total Export between India and Thailand; $\log(gdp_i)$ is the natural log of product of GDPs of India; $\log(gdp_t)$ is the natural log of product of GDPs of Thailand; $\log(Pop_i)$ is the natural log of population of India; $\log(Pop_t)$ is the natural log of population of Thailand; $\log(Dis_{it})$ is the natural log of geographical distance between India and Thailand.

Distance (dummy) will assume value of 1 if the country has joined CECA and it will take the value of '1' if otherwise. " ε_{it} " is the error term. The expected signs of the coefficients of variables in the above model as suggested by the economic theory are such that β_1 and β_2 are expected to have positive sign, as the theory proposes the GDP to be a positively influencing factor for trade volume. The variable β_3 and β_4 may be positive or negative while the distance is expected to be negative.

Results of the Study

This study has analyzed the trade flow between India and Thailand. The gravity model has been used. The estimation results are presented in Table 1. The results of Ordinary Least Square (OLS) regression for the pooled model gravity equation (4) are in the second column, while the fixed effects models equation (5) are in third column. R-squared values for both the equations are 0.985 and 0.983 respectively which indicates that the overall performance of the model is really good. The coefficient of determination (R^2) for the two models respectively suggest that ninety nine and ninety eight percent variations in the dependent variable is being explained by the explanatory variables. The estimated P value significance of both models reveals that the bilateral trade flows of India is better explained by gravity model. Further it is found to be well applicable to a single country case.

Table 1: Regression Results of gravity equations with different effects

Indo-Thailand Bilateral Trade		
Explanatory Variables	Pooled model	Fixed Effects
\ln_Y_i	-0.181* (0.437)	0.046 * (0.369)
\ln_Y_t	1.039 *** (0.359)	0.849 *** (0.301)
\ln_Pop_i	0.700* (1.047)	0.368 * (0.988)
\ln_Pop_t	12.830*** (3.466)	10.219*** (2.197)
dis_{it}	-0.139 * (0.143)	---
<i>Constant</i>	-55.441*** (16.894)	-42.894 *** (10.932)
<i>R-squared</i>	0.985	0.983
<i>Adj R-squared</i>	0.977	0.977
<i>Root MSE</i>	0.1059	0.10568

Note: *, ** and *** shows statistical significance at 10% and 5% and 1% respectively.

Source: Author's estimation

Result of Pooled Gravity Model

In the estimation of Pooled gravity equation, the signs of coefficients are as predicted by the economic theory. The Result of Pooled model revealed that India's GDPs have negative and insignificant impact on bilateral trade. Its coefficient is -0.181. This can be interpreted as follows, keeping all other variables constant: a 1 percent point decrease in the India's GDPs will on average lead to increase in the bilateral trade volume of India with the concerned trade partners by 18.1 percent. It indicates that the India's GDP has deemed to impede bilateral trade between India and Thailand.

Thailand's GDPs have positive and significant impact on bilateral trade. Its coefficient is 1.039 and is significant at one percent level. This coefficient can be interpreted as follows, keeping all other variables constant: a 1 percent point increase in the Thailand's GDPs will on average lead to increase in the bilateral trade volume of India with Thailand by 103.9 percent. Hence the coefficient of Thailand's GDP is statistically significant at one percent level and it is positive. The Thailand's GDP represents a strong direct relationship with India's bilateral trade, i.e., the Thailand's GDP has deemed to promote bilateral trade between India and Thailand.

With regard to the India and Thailand Populations, the two countries' Populations have positive and significant effect on bilateral trade and the level of significance is ten percent for India and one percent for Thailand. The value of its coefficient has been estimated to be 0.700 and 12.830 with a positive sign as was expected and can be interpreted as follows, keeping all other variables constant, a 1 percent point increase in both countries' population will on average lead to increase in the bilateral trade volume of India with Thailand by 70 percent and 1283 percent. Hence the coefficients of both countries' population are statistically significant at ten percent level for India and one percent level for Thailand and these are positive. This indicates that India's population has minimal impact on the bilateral trade between India and Thailand. Thailand Population has a strong direct relationship with India's bilateral trade, i.e., Thailand population is deemed to promote bilateral trade between India and Thailand.

In this analysis, the distance variable was taken as a dummy variable. Here the dummy variable shows a negative sign. The coefficient value is -0.139 and is

Language in India www.languageinindia.com ISSN 1930-2940 14:1 January 2014

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found to be significant at ten percent level. Coefficient of the distance (dummy) variable can be interpreted, keeping all other variables constant. Here the distance is acting as a negative factor which can be interpreted this way: since Thailand is comparatively far away than many other countries. That this distance factor acts negatively in India and Thailand trade relation can be proved. i.e., the factor of distance presents a hindrance to trade.

Result of Fixed Effect Gravity Model

Result of Fixed effect gravity model revealed that the countries' GDPs have positive and significant impact on bilateral trade. Its coefficient is 0.046 for India's GDP and has significant at ten percent level. This coefficient can be interpreted as keeping all other variables constant, a 1 percent point increase in the product of India's GDPs will on average lead to increase the bilateral trade volume of India with Thailand by 4.6 percent. This shows India's GDPs coefficient is statistically insignificant. It indicates that the factor of India's GDP has a minimal impact on the bilateral trade.

The coefficient has 0.849 for Thailand GDP and is significant at one percent level. This can be interpreted as follows, keeping all other variables constant: a 1 percent point increase in product of the Thailand's GDPs will on average lead to increase the bilateral trade volume of India with Thailand by 84.9 percent. This shows coefficient is statistically significant and it is positive. The Thailand GDP has a strong direct relationship with bilateral trade, i.e., the Thailand GDP is deemed to promote bilateral trade.

The two countries' Populations also have positive and significant effect on bilateral trade and the level of significance is ten percent for India and one percent for Thailand. The value of its coefficient has been estimated to be 0.368 and 10.219 with a positive sign as was expected and can be interpreted as follows, keeping all other variables constant: a 1 percent point increase in both countries' population will on average lead to increase the bilateral trade volume of India with the Thailand by 36.8 percent and 1021.9 percent. This indicates that India's population has minimal impact on the bilateral trade between India and Thailand and Thailand Population has a strong direct relationship with India's bilateral trade, i.e., the India's population has minimal impact on the bilateral trade between India and Thailand and Thailand Population has a strong direct relationship with India's bilateral trade, i.e., the Thailand population is deemed to promote bilateral trade between India and Thailand.

Conclusion

To conclude, it can be said that when the GDP of India increases there is no matching increase in India's export to Thailand. However, when the Thailand's GDP increases it is found out that India's export to Thailand too increases. This shows that Thailand trade is more leaning towards India. In case of India's population any fluctuation in its population is not showing any significant change in Indo-Thailand Trade. So, we can conclude that change in India's population is not having any impact in India's trade with Thailand. The distance factor which was used as a dummy variable show a negative trend which implies that the "distance" factor is acting as hindrance to Indo-Thailand Trade.

Removing the distance variable, the Indo-Thailand trade shows a different picture. This can be seen in the Fixed Effect model where India may do more trade with Thailand if its GDP or population increases. Further in case of Thailand, they do more trade with India when their GDP or population increases.

The trade analysis was made for the total trade between India and Thailand. Since 2004, Early Harvest Scheme (EHS) was in operation, and by 2006 almost 82 commodities become tariff free. The authors believe that this also made an impact in the India and Thailand trade relation. Having said that, it can be concluded that the future of India and Thailand trade will be more fruitful than expected.

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Language in India www.languageinindia.com ISSN 1930-2940 14:1 January 2014

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Language in India www.languageinindia.com ISSN 1930-2940 **14:1 January 2014**

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