Effects of Trade Liberalization on Income Distribution in Agricultural Based Countries – A Comparative Study Between Thailand and Indonesia

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Abstract

This review article is focused on the impact of trade liberalization on income distribution in agricultural based economies. The article tries to answer whether trade liberalization always improves income distribution in agricultural based countries. Although many articles show that trade liberalization helps improve social welfare among the trading countries, some articles describe the opposite. This study will employ the comparative research technique, using Thailand and Indonesia as ASEAN's representatives based on their economic profiles. Then literature reviews and analysis of correlations will be implemented to demonstrate the results. Regarding the comparative study, while Thailand enjoys improvement in income distribution through trade liberalization, tariff relaxation in Indonesia may not develop income distribution significantly. As a result, trade liberalization does not always improve income distribution in agricultural based countries.

Keywords: Trade Liberalization, Income Distribution, ASEAN, Agricultural Based Countries

Introduction

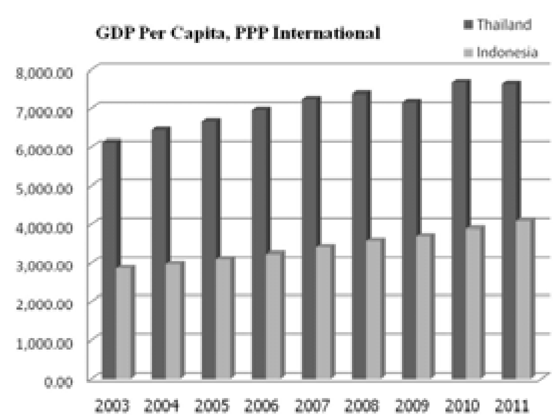
The Association of Southeast Asian Nations (ASEAN) created the latest Framework Agreement, the ASEAN Concord II (also known as Bali Concord II), in 2003. The final goal of economic integration was to establish the ASEAN Economic Community (AEC) as outlined in ASEAN Vision 2015. With a population of 600 million in Southeast Asia, the AEC will soon become the largest economic integration in the developing world. Free mobility of goods, services, foreign direct investment, skilled labor, and capital will likely take place within the region. The opportunity for the member countries to establish free trade agreements will occur both internally and externally. It is believed that every ASEAN member will mutually share the benefits.

However, theoretically and practically, there are many criticisms on free trade such as the infant industry argument, dying industry argument, and free-rider problem. Moreover, according to The Stolper-Samuelson Theorem [1], opening to trade will divide a country into specific gainers and losers in the long run. With these issues, the welfare of different parties (laborers, land owners, and capital owners) in ASEAN countries will not be distributed fairly and equally after the free trade; hence, having some effect on income distribution among different factor owners in ASEAN countries.

Therefore, this review article aims to answer the question, *"Does trade liberalization always improve income distribution in agricultural based countries?"* In order to do so, Thailand and Indonesia are selected to represent ASEAN countries. Then, a comparative study between Thailand and Indonesia will be conducted based on the countries' economic profiles. Finally, literature reviews and statistical analysis of correlation will be implemented.

Overview: Comparative Economic Profiles

Figure A



(Source: data.worldbank.org)

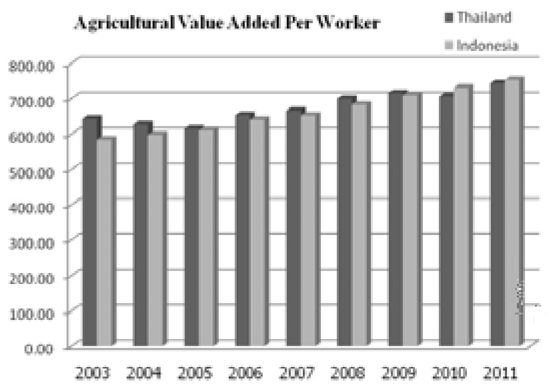
Figure B

Correlations - GDP Per Capita, PPP International

	Thailand	*Indonesia*
Thailand	*1*	
Indonesia	*0.94175532*	*1*

Figure A demonstrates that from 2003 to 2011, GDP per capita (with purchasing power parity basis) of Thailand differs significantly from Indonesia's. However, Figure B shows a strong correlation (≈0.94) between them, which implies that values of GDP per capita (PPP) of Thailand and Indonesia move in relatively the same directions.

Figure C



(Source: data.worldbank.org)

Figure D

Correlations - Agriculture Value Added Per Worker

	Thailand	*Indonesia*
Thailand	*1*	
Indonesia	*0.947706797*	*1*

Regarding Figure C, from 2003 to 2011 agricultural value added per worker of Thailand and Indonesia present nearly the same pattern on bar charts. Additionally, Figure D substantiates their strong correlation (≈0.95). As an implication, given relatively similar pattern of changes in GDP per capita over time, labor [2] in agriculture of Thailand and Indonesia value the same. Additionally, the percentage distributions of labor force in agricultural sector in Thailand and Indonesia are relatively the same: Thailand 38.2% and Indonesia 38.9% [3]. Under these assumptions, Thailand and Indonesia are appropriate ASEAN country representatives for the purpose of conducting a comparative study on effects of trade liberalization and income distribution.

Supportive Theory

Factor Endowments - the Heckscher-Ohlin Theorem - indicates that free trade differently affects factor prices (interest rate of capitalists, wage of laborers, and rent of land owners) of trading partners. In long run, the owners of the abundant factor will enjoy a rising price of their factor. However, the owners of less abundant factors will suffer due to declining factor prices. As a result, after free trade, there will be problems with income distribution incurring among factor owners in different trading countries. A number of previous studies have been carried out by researchers on the impact of trade liberalization on macroeconomics and income distribution, either of individual countries or a region (ASEAN). Their findings, however, vary in terms of size or magnitude.

Thailand

Trade Liberalization, Poverty and Income Distribution in Thailand: A Computable General Equilibrium - Microsimulation Analysis [4] suggest that the analysis of the impact of trade liberalization on poverty and inequality is complex because trade reform is considered the macro level while income distribution and poverty issues are observed and analyzed at the micro level. Thus, two approaches, based on a macro-micro framework, are employed in the study in order to connect the micro-macro gap: a Computable General Equilibrium (CGE) model is used to analyze the general equilibrium impacts on trade reform; and household survey data is used to analyze poverty at the micro level. The findings indicate that trade liberalization has a positive effect on Thailand's economic growth. While the output of the agricultural sector falls, the manufacturing sector's output rises after trade liberalization. Additionally, after trade reform, the labor moves from agricultural sectors to the expanding manufacturing and service sectors. At the micro level, household income rises due to an increase in unskilled and skilled wages, which are the main source of income for the majority of Thai people. According to the simulations, when labor is allowed to reallocate, an increase in GDP ranges from 0.07% to 0.16% while the poverty measure is found to decline ranging from 1.53% to 2.70%. Therefore, trade liberalization is found to reduce poverty. If more a liberalized trade policy incorporating the reallocation of labor from contracting agricultural sectors to manufacturing and service sectors is implemented, poverty would reduce in a greater magnitude, hence lowering the income distribution gap.

Indonesia

The study of *Impacts of ASEAN Agricultural Trade Liberalization on ASEAN-6 Economies and Income Distribution in Indonesia* [5] set out three scenarios of trade liberalization: Scenario_1 zero tariffs, intraregional ASEAN for agricultural products; Scenario_2 zero tariffs for agricultural products, excluding the sensitive and highly-sensitive products; and Scenario_3 ASEAN trade liberalization and the improvement of trade facilitation. Moreover, the impact of trade liberalization on income distribution in Indonesia was also conducted on all the scenarios. The result for ASEAN countries from the GTAP (Global Trade Analysis Project) simulations shows that although the Indonesian trade balance, nominal GDP, and ToT (terms of trade) experience positive impacts, Indonesian real GDP does not change. Indonesia also experiences the smallest improvement in the welfare rate. Unpleasantly, zero tariffs model worsens a wide range of Indonesian exports and increases Indonesian imports. Comparing zero tariffs for all agricultural products with zero tariffs excluding sensitive and highly-sensitive products, trade liberalization in the latter scenario will result in a better impact on the Indonesian economy.

Figure E

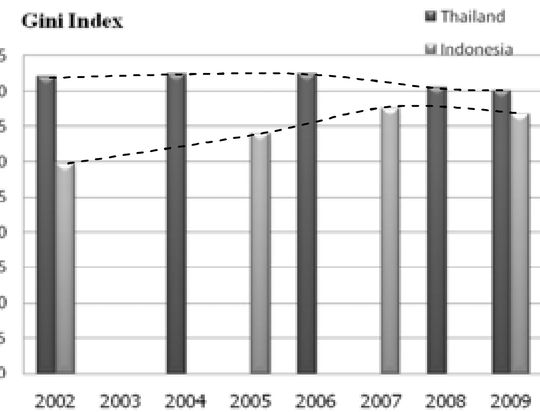
Aggregate real income		
Scenario 1	Scenario 2	Scenario 3
-0.003	0.366	0.516
-0.003	0.426	0.646
-0.002	0.426	0.666
-0.001	0.336	0.496
-0.003	0.296	0.406
-0.002	0.386	0.586
-0.002	0.256	0.356
-0.004	0.336	0.486
-0.003	0.306	0.446

[5]

Moreover, regarding Figure E, GTAP simulations indicate that under Scenario_1 Indonesia experiences negative effects in terms of income distribution. However, in Scenario_2 and Scenario_3, more positive changes in income distribution are demonstrated. Therefore, trade liberalization may not improve income distribution in Indonesia significantly. Though household welfare increase slightly due to trade liberalization, it is not enough to create a positive effect on the welfare of all Indonesian households. Some sensitive and highly-sensitive products still need protection under liberalization in order to raise household welfare, especially in the case of agricultural household categories.

Discussion: Gini Index and Trade Liberalization

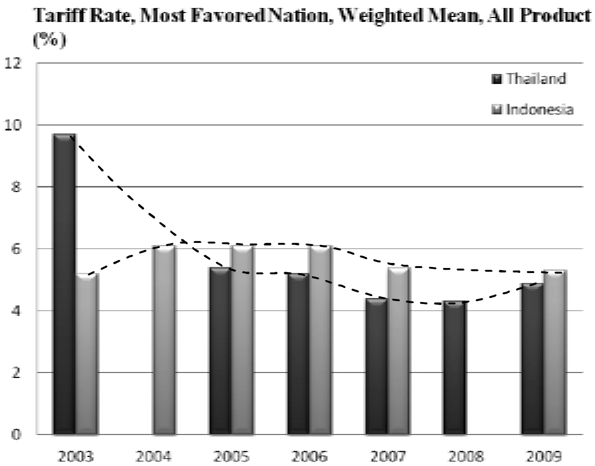
Figure F



(Source: www.tradingeconomics.org)

Figure F demonstrates that, from 2002 to 2009, while Thailand enjoys a slight decrease in Gini Index, Indonesia conversely experiences increasing Gini trend. The figure, thus, implies that the income gap in Thailand seems to gradually fall over time as opposed to rising income gap in Indonesia.

Figure G



(Source: data.worldbank.org)

According to Figure G, slightly downward trends of tariff rates for both Thailand and Indonesia entails more liberalized trade policies in both countries.

Figure H

Correlations between Tariff Rate and Gini Index

Thailand

	Tariff Rate	*Gini Index*
Tariff Rate	*1*	
Gini Index	*0.6101802*	*1*

Indonesia

	Tariff Rate	*Gini Index*
Tariff Rate	*1*	
Gini Index	*-0.944076*	*1*

Regarding Figure H, correlations between tariff rate and Gini Index confirm the findings of Akapaiboon [4] and Rina Octiviani [5]. In Thailand, the correlation of ≈0.61 implies a positive relationship between tariff rates and the Gini Index. As tariff rates decrease as a result of trade liberalization, the Gini Index reduces accordingly, implying trade liberalization causes a reduction in the income gap. On the other hand, a strong negative correlation of ≈-0.94 indicates an opposite direction between tariff rates and the Gini Index in Indonesia. As tariff rates fall, conversely the Gini Index increases, meaning tariff reduction may hurt income distribution in Indonesia. The latter phenomenon is explained by the Heckscher-Ohlin Theorem.

Conclusion

A strong correlation of GDP per capita between Thailand and Indonesia incorporated with a strong correlation of agricultural value added per worker between both countries helps to rationalize the comparative study on trade liberalization and income distribution between Thailand and Indonesia. The literature and statistical analyses demonstrate that, in agricultural based countries, trade liberalization can either improve or worsen income distribution. In Thailand, *Trade Liberalization, Poverty and Income Distribution in Thailand: A Computable General Equilibrium - Microsimulation Analysis* [4] found that trade liberalization progresses income distribution when reallocation of labor among different sectors is allowed to happen. In addition, correlation analysis between tariff rates and the Gini Index confirms this finding, showing positive relationship between the two variables. In Indonesia, on the other hand, *Impacts of ASEAN Agricultural Trade Liberalization on ASEAN-6 Economies and Income Distribution in Indonesia* [5] contradicts Akapaiboon's finding. It argues that trade liberalization may not improve income distribution significantly. The evidence is supported by strong, yet negative, correlation between tariff rates and the Gini Index. According to the comparative study between Thailand and Indonesia, using literature reviews and statistical analysis on economic profiles, we can therefore conclude that trade liberalization does not always improve income distribution in agricultural based countries.

Policy Recommendations

1. Trade liberalization helps to improve income distribution in just some agricultural based countries - not all of them.
2. When reallocation of labor is encouraged, policies aimed at skills training would ensure the smooth transition from agricultural to manufacturing or service sectors.
3. Being concerned about the issue of income distribution, some sensitive products (e.g. mainly agricultural products) may need protection under trade liberalization as it may not favor lots of poor farmers in the developing world.

References

[1] Stolper, W., & Paul, S. (1941). Protection and Real Wages. *Review of Economic Studies , 9-#1*, 58-73.

[2] Indicators, W. D. (n.d.). *USAID.* Retrieved 4 30, 2013, from Agriculture Value Added per Worker: http://www.countrycompass.com/data/postconflict/glossary.php?iid=34P1&s=t

[3] CIA. (2011). *The World Fact Book: Labor Force by Occupation*. Retrieved May 31, 2013, from Central Intelligence Agency: https://www.cia.gov/library/publications/the-world-factbook/fields/2048.html

[4] Akapaiboon, N. (2010). *Trade Liberalization, Poverty and Income Distribution in Thailand: A Computable General Equilibrium-Microsimulation Analysis.* North Carolina: The University of North Carolina at Chapel - the Department of Economics.

[5] Rina Octiviani, E. P. (2008, January). Impacts of ASEAN Agricultural Trade Liberalization on ASEAN-6 Economies and Income Distribution in Indonesia. *Asia-Pacific Research and Training Network on Trade Working Paper Series, No. 51* .