

DOES THE EXPORT SUBSIDIES ELIMINATION LAUNCHED BY WTO AFFECT THE WORLD MACROECONOMIES?

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Abstract: *This study specifically intends: (1) to identify the products that are given export subsidies by developed countries particularly United States of America (USA) and European Union (EU), (2) to explore the impact of export subsidies elimination particularly on agriculture by those countries on some world macroeconomy indicators such as Real GDP, Balance of Trade (BOT), and welfare society, and terms of Trade. Computable General Equilibrium (CGE) Model has been used to answer the research purposes, meanwhile The General Trade Analysis Project (GTAP) was employed as the main tool of analysis.*

The results show that impacts of export subsidies elimination by USA and EU on macroeconomic indicators are quite interesting. This policy does not result in a decrease in the EU macroeconomies as it has been expected. Infact, some their macroeconomic indicators increase when their export subsidies are eliminated. Meanwhile the impacts of this policy on the developing country macroeconomies are varied, but most of countries and macroeconomic indicators experience negative impacts, even not significant.

We conclude that export subsidies elimination by developed countries will not damage either the USA or the EU's macroeconomies. Otherwise, this policy creates an improvement on some their macroeconomic indicators. Based on this finding, therefore, there is no reason for EU to be afraid to implement the export subsidies elimination.

Keywords: Export Subsidies, Trade Liberalisation, GTAP Analysis

INTRODUCTION

The period from 2005 - 2015 was a period of significant change in free trade. This change marked by events such as the agreement of phasing out all forms of trade protections like domestic supports, export subsidies, and tariff that have been agreed by WTO's (World Trade Organization) conference members on the Ministerial meeting in Hong Kong at the end December 2005.

In the context of export subsidies, there are four important points that have been agreed. Those are: (1) determination of the modalities for reduction in all

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forms of export subsidies (end of 2013), (2) disciplinary STE (State Trading Enterprise) in export subsidies, and government funding that could lead to trade distortions, (3) disciplining the provision of food aid in the form of monetization and re-export, and (4) disciplining export credits, export credit guarantees or insurance programs (Programmes insurance), exporting STE and food aid (to be completed 30 April 2006). It is, however, although agreement to implement the three pillars have to be started since 2013, until 2015 these plans have not truly been implemented.

As stated by Haryadi (2008) that different perception between those who are infavour and those who are against WTO is never ended has been proved. Developed countries as the first group, which popularize the concept of free trade, were not consistent with their promise. One the the proof of this inconsistency is demonstrated by the fact that until today the developed countries still impose export subsidies for some commodities they export.

WTO (2015) reported that there are 429 commodities that there are still subsidized exports worldwide (Table 1). Among them, 214 are export subsidies imposed by European countries, 13 by the United States, and 6 by Australia. This means that more than half of the export subsidies are done by developed countries.

Table 1
Export Subsidies by Country/Countries Group

| <i>Number</i> | <i>Country/Countries Group</i> | <i>Export Subsidies</i> |
|---------------|--------------------------------|-------------------------|
| 1 | Africa | 62 |
| 2 | Asia | 8 |
| 3 | Europe | 214 |
| 4 | Least Developed Countries | 20 |
| 5 | Midle East | 0 |
| 6 | USA | 13 |
| 7 | Australia | 6 |
| 8 | Total | 429 |

Source: WTO, 2015

Defever, F and A. Riaño (2016) study the effect of subsidies subject to export share requirements (ESR). They suggests that this type of subsidy boosts exports more and provides greater protection for domestic firms than a standard unconditional export subsidy, albeit at a substantial welfare cost.

The question arises against this condition. "Why are developed countries still implementing export subsidies?". There are indications that the developed countries only impose developing countries to remove export subsidies, meanwhile they themselves are not willing to eliminate the export subsidies. This condition indicates that as if there is a doubt for the developed countries about the benefits of free trade itself.

Generally, two blocks have an interest in the WTO. Those blocks are developed which is motorized by United States of America (USA) and developing countries (Haryadi, 2008). European Union (EU) and United State of America (USA) motorize the developed countries, while the developing countries led by Indonesia, which establish a group known as G33. The developed countries push developing countries to eliminate export subsidies for agricultural products that will be exported to developed countries. In contrast, developing countries push developed countries to allow them to prevail a special treatment for a certain products. The reason of developing countries to apply such policy is plausible enough that the developed countries still help their domestic producers through *export subsidy programs*. This policy has pressed cost of production and raised the production in developed countries. This results an increase in their production because their farmers get incentive to raise their production. The impact of this unfair policy will bound their imports.

Refer to WTO's agreement, there is actually an agreement to eliminate all trade protection. The agreement has been ratified at the ministerial conference VI of WTO in Hong Kong 2005. Based on this agreement, three pillars in agricultural (*domestic supports, export subsidies, market accesses*) will be eliminating by 2013. Nevertheless, this policy has not been thoroughly implemented. It seems that member countries of WTO doubt to implement trade liberalization fully. As a prove is that the developed countries still give incentives to their farmers in order to increase their domestic products, meanwhile developing countries still prevail tariff. This research intends to explore impact of agricultural export subsidies elimination by developed countries on the performance of asean macroeconomies and Indonesian trade balance.

LITERATURE REVIEW

Basic Concept of Export Subsidies

Export subsidy is an incentive given by a government to their exporters with expectation that this policy will be able to encourage the exports. This policy is carried out through several ways such as: direct grant, export's credit, and export promotion. With kind of subsidies, cost of exported products will decrease, so that the export will rise. The comparative advantage and competitive advantage of the product will also increase. Besides that, the price of such commodities will be cheaper than those of foreign goods.

The impacts of export subsidy are varied (Haryadi, 2008). If the export subsidy is directed toward foreign market, so the domestic price will be getting higher. It is, however, generally this policy is carried out to protect domestic producer who is facing a competition in foreign markets. Through the protection, it is expected that exported products will increase.

Export Subsidies (Large Countries Case)

Basically, there is no difference between export subsidy in the case of large countries and small countries (Salvatore, 2000). The different is in the ability of the policy to affect world price (Haryadi, 2009). If export subsidy is given by a large country, so the ratio of the world price will change, and vice versa.

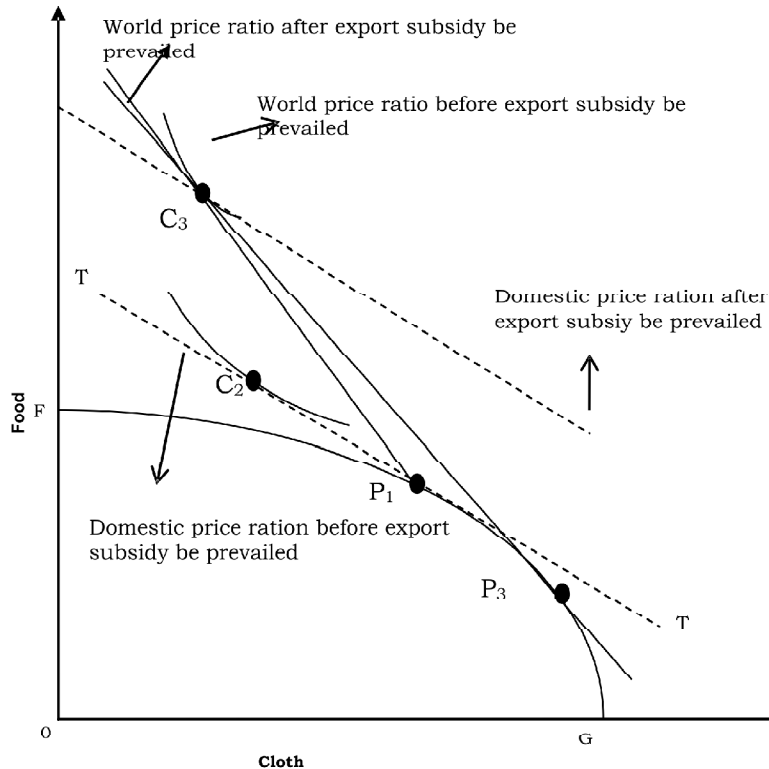


Figure 1: Impact of Export Subsidy Using General Equilibrium Model for A Large Country's Case

Source: Modified from Dunn Jr and Mutti (2000)

The impact of export subsidy for large countries can be explained in Figure 1. Before country A applies export subsidy, the country's production is in P1, while consumption is in C1, in which indifference curve is tangent of price ratio. Figure 1 shows the impact of export subsidies using General Equilibrium approach for a large country's case. Say that the government of country A give an export subsidy to her cloth producers. This then causes the world price for cloth decrease relatively to the price of food. At this condition, for a certain level of export subsidy, domestic price for cloth will increase even it is not as high as an increase in the previous. This policy leads the world price ratio shift from TT to P3C3. Production is in P3. International trade now is taking place at the price ratio along P3C3.

New consumption balance is located at C_2 , when export subsidy and the line distorted domestic price is tangent of an indifferent curve, and world price line also passes this point (Figure 2). As it is shown at Figure 3, country A can achieve an indifferent curve higher than previous one due to the export subsidy's policy. It is, however, the magnitude of this increase is affected by a change of current world price ratio. Briefly, it could be said that country A will take benefit from export subsidies when the benefit from TOT is larger than the loss obtained from inefficient domestic resource. To what extent the improvement of TOT, it is depend on the elasticity of domestic and supply of domestic and foreign.

It is, however, export subsidy will create disbenefit for ROW's producers, because they will lose their competitive advantage compare with the producers given export subsidy. If each country carried out this policy, they can counter with the same policy. This then cause TT shifts back to the previous position.

Previous Study about the Impact of Trade Liberalization

Impact on Macroeconomic Performance

UNCTAD (2003) carried out a research in a number of country concerning with the impact of trade liberalization on export growth. The finding showed that Indonesia is the country that will take a smallest positive impact after Turki. Eventhough this study did not state too specific regarding with the impact of export by sectoral, the result give an indication that Indonesia has a lot of problems, either from supply side or demand side.

Devaragan, Lewis dan Robinson (1990) explored the impact of trade liberalization with focussing one two sector model. Their finding showed that the change in *term of trade* (TOT) in the African Countries has created an income effect and results in an increase in demand of goods for domestics higher than those of income effect. Based on this finding, this effect did not improve their economies but worsen their balance of trade. This finding is consisten with Aggarwal and Agmon in Wijaya (2000). Wijaya found that eventhough developing countries liberate their trade and investment systems, investor countries would get more benefit compared with developing countries.

In the context of APEC, a research regarding with trade liberalization has been carried out by Oktaviani (2000). She analyzed the impact of trade liberalization on the macro and sectoral economy in agricultural sector. In an integrated world market, changing global and regional trade policies can influence the economic performance of any given country. In the Asia Pacific region, the APEC forum has become an important vehicle for cooperation among member nations. The results for APEC countries from the GTAP simulations can be summarized as follows. Most APEC members experience positive impacts resulting from the elimination of tariffs in all APEC countries. Real GDP increases in all APEC countries in the

short run (0.03 -5 per cent) and more in the long run (up to 20 per cent for ASEAN countries), except in North America. Unlike other APEC countries, household consumption decreases in North America. Together with a decrease on net exports, this brings about a decrease in GDP expenditure.

This finding is similar to those of Murtough *et al.* (1994), Hertel *et al.* (1995) and Walmsley (1998) and relates to relatively high initial tariffs. The larger improvement of GDP in the long run may be caused by an increase in the expected global rate of return on capital, reflecting increased capital productivity in the long run. Given the focus of this study on Indonesia, the results for other APEC members of trade liberalization by only the APEC developed countries have not been reported in detail in the thesis. The results are, however, similar to those in Murtough *et al.* (1994), namely small gains. APEC members as a group will be better off by not delaying trade liberalisation.

Futhermore, Oktaviani (2000) also stated that with capital mobile in the long run steady state simulation, the estimated impacts of trade liberalization are significantly bigger than those estimated using the initial non-equilibrium database. For example, real GDP in Australia-New Zealand increases by 3.1 per cent using the steady state database but only 1.59 per cent under the benchmark data base. The relative and absolute differences are even greater for some other regions. These differences suggest it is important in long run CGE analysis to use a properly adjusted database. If the long run requires rates of return to be equal, then those studies that have not used a steady state database are likely to have wrongly estimated, and probably underestimated, the impacts of the exogenous changes analyzed. The results of most long-run CGE studies would be subject to this qualification.

In the context of AFTA, impact of liberalization has been explored by Hakim (2004). He stated that the ASEAN member economies have been pursuing different economic co-operation in order to enhance trade among the members. In 1977 an ASEAN Preferential Trading Arrangement (PTA) was established. Due to limited product coverage and a lack of pro-competitive environment, the ASEAN PTA did not bring about what the members expected. A successful history of the integration of Europe (European Union) and the challenge of North American.

Free Trade Area have forced the ASEAN member countries to re-evaluate their past co-operation and to strengthen their own co-operative arrangement. The establishments of the European Single Market 1992 and NAFTA would affect the economic structure (trade) of the ASEAN countries. Driven by the emerging markets in several regions such as China and Southeast Asia, intra-regional trade among ASEAN has been profound. The flows of intra-regional investment have also complemented the growth of intra-regional trade in reinforcing the inter-dependence of ASEAN economies. In response to the more open world economy,

economic deregulation and trade liberalisation provide a solid foundation for the success of regional co-operation. Therefore in 1992 the ASEAN nations reviewed their past and current trade agreement and agreed to move to a deeper economic co-operation by establishing the so-called ASEAN Free Trade Area (AFTA).

The establishment of AFTA, however, raises criticisms and concerns whether AFTA tariff would boost intra AFTA trade. A similarity in natural endowment, diverse in economic development within the ASEAN member countries and a high dependency of their trade on other trading partners such USA, Japan and EU would impede and prohibit trade among the members. In addition, the 1992 agreement also excluded agricultural products from tariff reduction. Therefore, the effectiveness of the establishment of AFTA was overwhelmingly questionable. Despite the fact that the member reviewed the 1992 AFTA agreement and decided to include unprocessed agricultural products in the CEPT scheme, Indonesia and Malaysia expressed their concerns over the possible impact of the AFTA on millions of farmers.

Impact of World Trade Organization on Economy

In the context of WTO, research about the impact of trade liberalization has been carried out by McKibbin dan Woo (2003), Morley dan Piñeiro (2004), Brooks dan Sugiyarto (2005), Walsh et al. (2005). McKibbin dan Woo (2003) carried out simulation using a number of scenarios for multi-countries macroeconomic model. His finding showed that the China entrance to WTO created a positive effect on China it self, but it has a small effect on OECD countries.

Pineiro (2004) analyzed the effect on output, employment and poverty of two (2) alternative versions of further trade liberalization- one representing free trade world wide (WTO) and the other a Western hemisphere free trade bloc (FTAA). The paper introduces international commodity price changes derived from a world model into national Computable General Equilibrium (CGE) and micro simulation models for fifteen (15) Latin American countries to estimate how FTAA and WTO would affect sectoral output, employment, wages and poverty levels at the national level for each of the countries. We found that either of these two alternatives is expansionary for both output and employment in general and for agriculture in particular in most Latin American countries. WTO particularly favors the rural sector because the elimination of producer subsidies in developed countries causes a big increase in prices of all food commodities, especially on grains, dairy products and milk. As a result we found that in general, trade liberalization reduced skill differentials, both within the urban sector, and where we had the information, between the rural and urban unskilled. Finally, the poverty microsimulation exercise showed that the poor are helped by either WTO or FTAA. Either version reduces poverty and inequality, or the changes are especially significant under the WTO. Clearly the rural poor pay a fairly heavy price for the producer subsidies in developed countries.

Brooks dan Sugiyarto (2005), address two question concerning with the implementation of Doha Development Agenda: *First*, is there any logic reasons for developing countries to implement trade protections?. Second, is there any impact of agricultural trade liberalization if all members committed to implement The Doha Agenda?. Ththese two questions indicated that tax for domestic products seems difficult to be implemented because it has to cause the welfare fail when liberalization is eliminated. Based on literature, the study of impact of export subsidy on the macroeconomics is stiiil poor.

RESEARCH METHOD

Types and Sources of Data

This study uses secondary data, mostly derived from the database of General Trade analysis Project (GTAP) version 7. Other complementary data derived from relevant agencies such as the World Bank, International Monetary Fund, Bank Indonesia, Central Bureau of Statistics, ASEANSec, Ministry of Trade, Ministry of Industry, Ministry of Foreign Affairs and others.

The main analytical tool used is the GTAP multi-country. In the GTAP data base there are 113 countries / regions and 57 commodity sectors. Data by country/ regions and sectors will be aggregated and disaggregated based on the purposes of the study. The process of sorting and merging it (disaggregation and aggregation) will be determined by various considerations: (1) for the ASEAN countries, ASEAN-5 will be separated with the rest of ASEAN such as Cambodia, Lao, Myanmar, and Brunei.

Table 1
Aggregation of Countries/Regions based on GTAP Aggregation

| Aggregation based on GTAP Database | | | |
|---|------------------------|--------------------------|--|
| <i>No</i> | <i>New Aggregation</i> | | <i>Keterangan</i> |
| | <i>Code</i> | <i>Description</i> | |
| 1 | ANZ | Australia, New Zealand | Australia, New Zealand |
| 2 | Chn | China | China |
| 3 | Jpg | Japan | Japan |
| 4 | Idn | Indonesia | Indonesia |
| 5 | Mys | Malaysia | Malaysia |
| 6 | Phl | Philippines | Philippines |
| 7 | Tha | Thailand | Thailand |
| 8 | Vnm | Viet Nam | Viet Nam |
| 9 | XSE | Rest of ASEAN | Brunai, Lao, Cambodia, Singapore, Myan Mar |
| 10 | USA | United States of America | United States |

contd. table 1

| No | New Aggregation | | Keterangan |
|----|-----------------|------------------|--|
| | Code | Description | |
| 11 | EU | European Union | Austria;Belgium; Denmark; Finland; France; Germany; United Kingdom; Greece; Ireland; Italy; Luxemburg; Netherlands; Portugal; Spain; Sweden |
| 12 | G33 | G33 | Korea; India; Sri Lanka; Peru; Venezuela; Bostwana; Mozambique; Tanzania; Zambia; Zimbabwe; Madagaskar: Uganda; Turkey. |
| 13 | ROW | All other region | Rest of Oceania; Hong Kong; Taiwan; Rest of East Asia; Singapore; Rest of Southeast Asia; Canada; Mexico; Rest of Neorth America; Columbia; Rest of Andrean Pact; Argentina; Brazil: XChile; Uruguay; Rest of South America; Central America; Rest of FTAA; Rest of The Carribbean; Switzeland; Rest of EFTA; Rest of Europe; Albania; Bulgaria; Croatia; Cyprus; Czech Republic; Hungaria; Malta; Poland; Romania; Slovakia; Slovenia; Estoria; Latvia; Lithuania; Russian Federation; Rest of Former Soviet Union; Rest of Middle East; Morocco; Tunisia; Rest of North Africa; South Africa; Rest of South African CU; Malawi; Resto of Sub-Saharan Africa; Armenia; Azerbaijan; Georgia; Iran; Rest of Western Asia; Ethiopia; Nigeria; Sinegal; Ukraina; Rest of Eastern Europe; Norway; Costa Rica; Guatemala; Nicaragua; Panama; Egypt. |

The same condition will be treated in the contects of commodity/sectors, (2) agricultural commodities will be separated according to group of commodities such as those found in the GTAP 7. Based on the above considerations, in the research, it is planned that countries or regions will be aggregated into 13 regions (Table 1), while the commodity will be grouped into 16 (Table 2).

DATA ANALYSIS METHOD

Data were analyzed both qualitatively and quantitatively. Qualitative analysis is intended to see the development and trade flows and to determine the contribution of member countries in intra-and extra-ASEAN trade. Based on this analysis, it will be known the direction and can also be identified opportunities that could be exploited by Indonesia. Meanwhile, Quantitative analysis was conducted to measure the impact of trade liberalization policies that have been agreed by ASEAN. GTAP model in detail can be found in Hertel (1997).

Table 2
Agregation of sectors based on GTAP Aggregation

Agregasi Sektor Berdasarkan Database GTAP

| No | New Sectors | | Detailed Sector |
|----|-----------------------|------------------------------|---|
| | Code | Deskription | |
| 1 | Paddy | Rice and Processed rice | Paddy rice, processed rice |
| 2 | Wheat | Wheat | Wheat |
| 3 | Corn | Corn | Cereal grains nec |
| 4 | Horti | Vegetable and Fruit | Vegetabel, fruit, nuts |
| 5 | Soya bean | Soya bean | Oil seeds |
| 6 | Sugar | Sugar | Sugar cane, sugar beet, Sugar |
| 7 | Plant based fiber | Plant based fiber | Plant-based fibers |
| 8 | Cattle | Cow, buffalow, horse etc | Cattle, sheep, goats, horses, meat: cattle, sheep, goat, horse |
| 9 | Other Animal Products | Chicken, bird etc. | |
| 10 | Milk | Milk and Processed Milk | Raw milik, Dairy products |
| 11 | OthAgric | Other Agricultural product | Crops nec, wool, silk worm, cocoons; forestry, fishing |
| 12 | Vegetable Oil | Vegetable Oil | Vegetable oils and fats |
| 13 | Food | Processed Food | Food products nec, Bevareges and tobacco products |
| 14 | Oth Prim | Other Primary Products | Coal; oil; gas; mineral nec |
| 15 | Mnfcs | Manufacture | Textiles; wearing apparel; leather products; wood products; paper products; publishing; petroleum; coal products; chemical, rubber, plastic prods; Mineral products nec; ferrous metals; Metal nec; Metal products, Motor Vehicle and parts; Transportation equipment nec; Electric equipment; Machinary and equipment nec; Manufactures nbec |
| 16 | Svces | Services and activitties NES | Electricity; Gas manufacture, distribution; Water, construction; Trade; Transport nec; Insurance; Business sevices nec; Recreation and other services; PubAdmin/Defence/Health/Educat : Dwellings |

DATA PROCESSING METHOD

GTAP model is processed by using software RunGTAP. Stages of data processing can be explained by Figure 3. The process of aggregation of sectors and countries/regions is done by using GTAPAgg. Data processing with RunGTAP will be done by using an adjustment closure (cover model) and shock in accordance with the

purpose of research. Processed data will produce the output (out) like a solution, volume changes, and decomposition. Completion of this section includes a solution file (solution file), change in volume (volume changes), and decomposition (decomposition).

RESEARCH STAGES

This research was conducted through several stages (figure 4). Generally, it can be explained as follows. To get a map of trade flows and policy simulation, first we must own GTAP program Agg. The program has database, main model, and experiment. Through this program countries / regions and sectors (commodities) can disaggregated accordance with countries that becomes the focus in the research. After aggregating regions and sectors, then shock of with the government adjusted by agreement of ASEAN countries. Furthermore, using simulation to see the impact of tariff elimination was made. Through in-depth analysis process (in-depth study), we will obtain results that can explain the changes as the impact of implementation of free trade policies in the ASEAN.

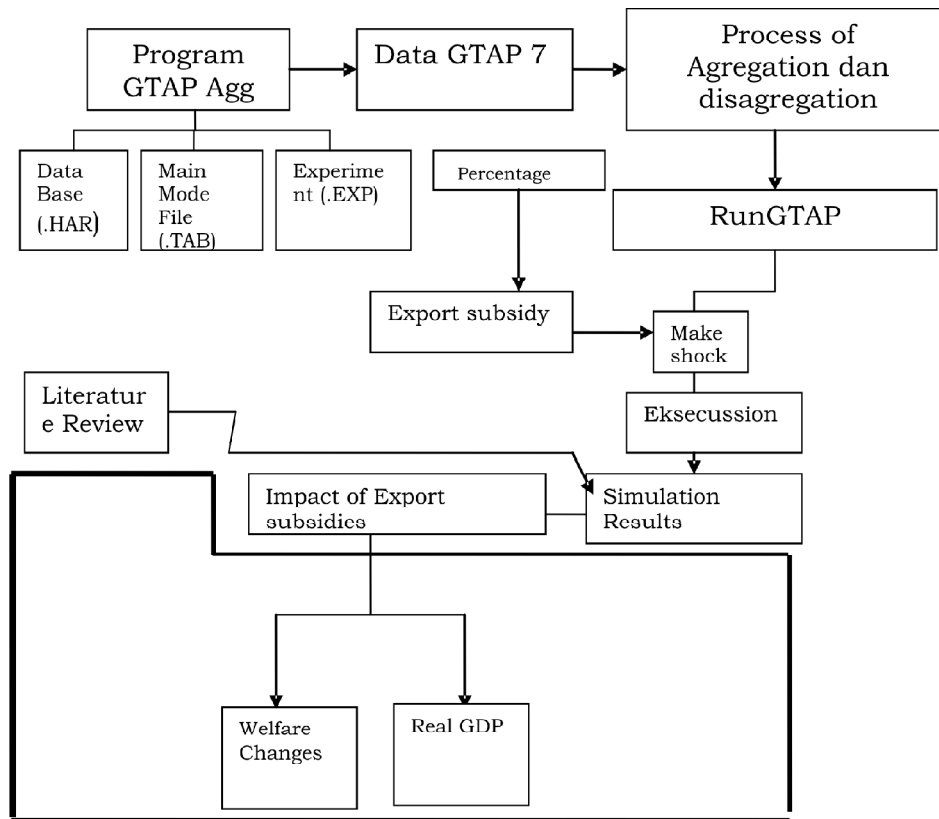


Figure 2: Research Flow Chart

Policy Simulation

Simulations of the impact of the elimination of export subsidy policy are carried out with removing the export subsidies 100%.

RESULTS AND DISCUSSION

Identifying the product which is given Export Subsidies by Developed Countries

Based on the GTAP 7 databased, two developed countries give export subsidies to their exporter. Both countries are USA and EU. Nevertheless, USA gives export subsidies for milk commodity and the magnitude of that subsidy is equal to different countries destination (Tabel 3).

Tabel 3
Export Subsidies for Commodity of Milk Given by United States of America Based on Countries Destination

| <i>Countries Destination</i> | <i>Rate (%)</i> |
|------------------------------|-----------------|
| Australia & New Zealand | 7.83 |
| China | 7.83 |
| Japan | 7.83 |
| Indonesia | 7.83 |
| Malaysia | 7.83 |
| Philippines | 7.83 |
| Thailand | 7.83 |
| Vietnam | 7.83 |
| Other ASEAN Countries | 7.83 |
| European Union | 7.83 |
| G33 | 7.83 |
| Rest of the World | 7.83 |
| Average | 7.83 |

Source: GTAP 7 Database

Contrast with USA, EU apply export subsidies for more than two commodities (Tabel 4). Among those commodities, subsidy for sugar is the highest, followed by rice, corn, and milk. The lowest subsidy is given by EU for vegetable products with average 2.31 percent. Interestingly, the number of subsidies given by EU not only vary based on commodities but also vary based on countries destination.

Impact Export Subsidies on World Macroeconomies

The impact of export subsidy elimination policy by developed countries on some macroeconomic indicators is summarized in the Table 4. The export subsidies elimination policy by USA and EU will create a positive impact on terms of trade of both countries even relative small (between 1% up to 2%). A small impact also

Tabel 4
Export Subsidies Given by EU based on Countries Destination

| <i>Countries Destination</i> | <i>Rice</i> | <i>Wheat</i> | <i>Corn</i> | <i>Vegetable</i> | <i>Sugar</i> | <i>Cattle etc</i> | (%) |
|------------------------------|-------------|--------------|-------------|------------------|--------------|-------------------|-------|
| Australia & New Zealand | 42.51 | 8.63 | 33.39 | 2.31 | 60.03 | 13.52 | 30.44 |
| China | 42.21 | 8.63 | 33.39 | 2.31 | 59.51 | 7.52 | 30.52 |
| Japan | 42.59 | 8.63 | 33.39 | 2.31 | 59.92 | 7.44 | 30.56 |
| Indonesia | 44.11 | 8.63 | 33.39 | 2.31 | 60.16 | 27.31 | 30.7 |
| Malaysia | 42.19 | 8.63 | 33.39 | 2.31 | 59.95 | 10.24 | 30.68 |
| Philippines | 40.53 | 8.63 | 33.39 | 2.31 | 60.2 | 19.52 | 30.73 |
| Thailand | 42.56 | 8.63 | 33.39 | 2.31 | 60.08 | 14.35 | 30.69 |
| Vietnam | 43.41 | 8.63 | 33.39 | 2.31 | 59.97 | 26.63 | 30.58 |
| Other ASEAN Countries | 41.03 | 8.63 | 33.39 | 2.31 | 59.78 | 17.38 | 30.63 |
| Uni Eropa | 43.93 | 8.63 | 33.39 | 2.31 | 59.49 | 11.09 | 30.49 |
| G33 | 45.47 | 8.63 | 33.39 | 2.31 | 60.1 | 5.48 | 30.6 |
| Rest of the World | 39.58 | 8.63 | 33.39 | 2.31 | 58.82 | 20.29 | 30.72 |
| Average | 39.24 | 7.97 | 30.82 | 2.13 | 55.23 | 13.90 | 28.25 |

Sumber: *Database GTAP 7 (Processed)*

happened for terms of trade in the rest countries. Nevertheless, the impacts on the rest countries are negative (except for Australia and New Zealand). Both countries that is also categories as developed countries take the largest positive impact among countries in the world (Tabel 5).

Impact of export subsidy policy by developed countries (USA and EU) on real GDP is also summarized in Tabel 4. The impact of this policy on real GDP is also small. Among countries in Tabel 4, EU will take the largest impact of this policy (even below 1%). Interestingly, the policy would not change the real GDP of four countries (China, Indonesia, Malaysia, and USA). On the contrary, this policy results in a decrease in the real GDP of the Australia, New Zealand, Japan, Philippines, Thailand, Viet Nam, and the Rest of ASEAN members. Nevertheless, the impact is expected to be very small.

With regard to balance of trade, simulation result indicates the balance of trade of EU and USA still surplus even they eliminate their export subsidies. On the contrary, the trade balance of the rest countries still experience deficit even USA and EU has eliminate their subsidies for their exports. This finding supports the argument that USA and EU still have some advantage even they apply this policy.

The impact of export subsidies elimination by USA and EU on welfare society has also been explored. Simulation result shows that welfare society for both countries would rise as the impact of export subsidies elimination. Meanwhile, the rest countries welfare society (except Australia and New Zealand) would expected to decline. Japan and Philippines appear as the countries that experience

Table 5
Impact of Export Subsidies by Developed Countries on Several World
Macroeconomic Indicators

| <i>Country</i> | <i>GDP Rril</i> | <i>Term of Trade</i> | <i>Balance of Trade</i> <i>(US \$ Million)</i> | <i>Welfare Change</i> <i>(US \$ Million)</i> |
|--------------------------|-----------------|----------------------|---|---|
| Australia & New Zealand | -0.01 | 0.32 | -161.63 | 252.93 |
| China | 0.00 | -0.02 | 55.00 | -101.62 |
| Japan | -0.01 | -0.03 | -155.62 | -358.49 |
| Indonesia | 0.00 | -0.05 | 6.54 | -24.19 |
| Malaysia | 0.00 | -0.03 | 4.06 | -19.47 |
| Philippines | -0.01 | -0.05 | 2.30 | -27.29 |
| Thailand | -0.01 | 0.00 | 13.41 | -3.89 |
| Vietnam | -0.01 | -0.03 | 2.84 | -10.06 |
| Rest of ASEAN | -0.03 | -0.07 | 1.10 | -45.07 |
| United States of America | 0.00 | 0.01 | 385.35 | 55.34 |
| European Union | 0.03 | 0.02 | 846.90 | 2861.46 |
| G33 | -0.01 | -0.01 | 24.83 | -114.06 |
| Rest of the World | -0.02 | -0.03 | -253.29 | -1738.82 |

the largest decline in their welfare society. Interestingly, even though the welfare of Thailand also shrinks, its decrease would be relatively small.

CONCLUSION AND POLICY IMPLICATION

Conclusion

1. Among developed countries, USA and EU are two among the developed countries who still implement export subsidies policy.
2. The elimination of export subsidies implemented by USA and EU does not contribute significant negative affect on the world macroeconomic indicators.
3. USA and EU will be able to improve their macroeconomic indicators even they eliminate their export subsidies policy
4. The macroeconomic indicator of developing countries does not improve significantly even developed countries eliminate their export subsidies policy.

Policy Implications

Based on the conclusion, the policy implications are formulated as follow.

1. All countries should eliminate export subsidies for their producers.
2. Developed countries should eliminate all kinds of export subsidies.
3. There is no reason for developed countries to doubt in eliminating export subsidy policy.

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