

## **IMPACT OF FREE TRADE AGREEMENTS ON INDONESIA ECONOMIC PERFORMANCES**

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### **ABSTRACT**

*Indonesia participates in various free trade agreements with its main trading partners and it raises a research problem namely whether the participation would create benefits for Indonesia economic performances. Then, the research problem generates research questions that are what are the impacts of free trade agreements several aspects particularly for economic, social, and environment.*

*Main objectives of this research will focus to assess the impacts of free trade agreements on: (i) economic aspects such as economic growth, export and import performances, balance of trade, terms of trade, investment, inflation, government expenditure and consumption, and sector output; (ii) social aspect such as labor market, wages, income gap between skilled and unskilled labor, social welfare; and (iii) environment aspect.*

*Method of the research employs an economic model of computable general equilibrium on international trade, namely Global Trade Analysis Project (GTAP Model 8 version). There are two policy simulations of tariff reduction namely: (i) Simulation I, tariff of agriculture products reduced by 65% and tariff of non-agriculture products reduced by 85%; (ii) Simulation II, tariff of agriculture products reduced by 80% and tariff of non-agriculture products reduced by 100%. The research found that in general, impact of free trade agreement benefit for Indonesia economic performances, it indicated by economic variables that contribute positively to the economic performances are greater than economic variables that contribute negatively to the economic performances. The positive economic variables are economic growth, export performance, terms of trade, balance of trade, investment, government expenditure and consumption, wages, social welfare. While the negative economic variables are import performance, inflation, sector output, labor market, income gap of skilled and unskilled labors, emission proliferation.*

*Research limitations related to the secondary data sources that depend on data published by international and national institutions as well as the data that already embodied in the GTAP Model. Policy implication to the government policy namely: (i) to undertake economic and trade reform to improve competitiveness; (ii) to undertake deeply comprehensive study before participation in the FTA; (iii) to give assistances for loser business particularly for small and medium enterprises; (iv) to socialize actively about the FTA to related business community.*

*Keywords: ASEAN+5, free trade agreement, GTAP Model, Indonesia Economic Performances.*

## INTRODUCTION

### **Background of the Research**

In 1986, it was launched the Uruguay Round of Multilateral Trade Negotiations, in which negotiation in the Uruguay Round was broader and beyond tariffs reduction and the negotiations covered various sectors such as trade in goods, trade in services, intellectual property rights, trade related to investment measures, agriculture, textiles and clothing, sanitary and phytosanitary measures, technical barriers to trade, rules, and agriculture products as well as textiles and clothing. The Uruguay Round was directed also to set up establishment of the World Trade Organization (WTO), to secure multilateral trading system is free and open in order to induce more world trade. During the last ten years world trade improved significantly, in 2014 total world trade recorded US\$ 37.13 trillions increase 74% from 2005 (Table 1).

After nine years negotiations, the Uruguay Round finally concluded and succeeded to establish the World Trade Organization that took into force on January 1, 1995. There are several functions and objectives of the WTO namely: (i) to facilitate the implementation of the agreement and the future agreements that may be negotiated; (ii) to provide a forum for further negotiations both for matters covered by agreements and new agreements; (iii) to be responsible for the settlement of disputes and differences among the WTO members; (iv) to carry out or conducting a periodic of trade policy review of WTO members (International Trade Centre, 1995).

However, concluding the Uruguay Round actually is still left over many remaining issues and members of the WTO set up another trade round to negotiate the remaining issues as well as new issues. Therefore, in the Ministerial Conference on 9-14 November 2001 in Doha, Qatar, it was launched the new Trade Round called Doha Development Agenda (DDA). The Doha Development Agenda is very ambitious and a lot of issues put in the agenda including: agriculture, non-agriculture market access, trade facilitation, special and differential treatment, implementation-related issues and concerns, rules, trade-related intellectual property rights, trade and environment, and dispute settlement understanding (World Trade Organization, 2001). Since launching of the Doha Development Agenda in 2001, there are ten times Ministerial Conferences including the last Ministerial Conference X in Nairobi from 15-18 December 2015. Every Ministerial Conferences always tried to solve the issues of the Doha Development Agenda, but it was difficult to reach the agreement among the parties particularly related to the sensitive issue such as agriculture liberalization. Although almost fifteen years, there is no sign when the negotiation or DDA will be concluded, because in the Nairobi Ministerial Declaration only stated about polarization of the members namely some members reaffirm their commitment to conclude the DDA and other members do not reaffirm and new approach is necessary (World Trade Organization, 2015c). It means that the DDA is still far away from the final agreement or conclusion. This condition creates a greater uncertainty on multilateral trading system and it will generate more countries to find their own ways to protect and secure their international trade interests. Therefore, many countries took an initiative to form a free trade agreement with their trading partners, although the initiative of formation a free trade agreement actually already started in early 1990s when the Uruguay Round was predicted not to be concluded soon or even failed.

According to Secretariat of the WTO, as of November 30, 2015 there are 162 countries became member of the WTO. Among the members, there are a lot of countries committed to have a free trade agreement with their trading partners and as of 2015 the WTO Secretariat had noted that the free trade agreement had taken into force 413 agreements that consist of 240 trade in goods agreements, 134 trade in services agreements, and 39 agreements based on the enabling clause.

Therefore, it is understandable that failing multilateral trade negotiation (including the DDA) will bring about a proliferation of regional or bilateral cooperation in the form of establishment of free trade area. Most of developing countries including Indonesia are actually preferable to the multilateral forum (WTO forum) instead of regional or bilateral forum for trade negotiation. In the multilateral forum Indonesia can unite or make a group among developing countries to set joint agenda or position for any issue related to the negotiation. Having group of the developing countries, it will have a better position in the negotiation. While in the bilateral or regional forum, it should stand alone to face with its trading partners that frequently creates unfavorable condition particularly when deals with the developed countries.

After among ASEAN members have strong economic foundation and for the propose of increasing competitiveness in the global market as well as facing the dynamic of the world economic, ASEAN signed free trade agreements with some dialog partners namely the People's Republic of China, Japan, the Republic of Korea, Australia and New Zealand, and Republic of India or called (ASEAN+5). In addition, beside part of the free trade areas between ASEAN and its dialog partners, Indonesia bilaterally also signed a free trade agreement with Japan that was Indonesia-Japan Economic Partnership Agreement (IJEPA). Other ASEAN member countries also have a free trade agreement with their trading partners separately. Since ASEAN is not a customs union, each member is free or allowed to have free trade agreement with its trading partner. Economic potential of ASEAN+5 is very huge, they are represented 48.5% of the world population, 22% of Gross Domestic Products of the world, and 28,3% of world total trade (Table 2).

### **Research Problem and Questions**

Indonesia participates in various free trade agreement both in the framework of regional and bilateral and the existing free trade agreement covered six regions/countries. Nowadays, Indonesia is also in the process of negotiation of new free trade agreement with its trading partners. Participation in the free trade agreement will lead to rise a research problem namely whether the participation of Indonesia in the various free trade agreements would bring about more benefits for the Indonesia economic performances. The problem should be answered to avoid public skepticism to the government policy on the free trade agreements. Based on the research problem, it generates several research questions that should be answered. The research questions related particularly to the three elements of sustainable development namely: (i) what is the impacts of free trade agreement on economic aspects such as economic growth, export and import performances, balance of trade, terms of trade, investment, inflation, government expenditure and consumption, and sector outputs; (ii) what is the impacts of free trade agreement on social aspects such as labor market, wages, income gap between skilled and skilled labors, social welfare; (iii) what is the impacts of free trade agreement

on environment aspects such emissions proliferation.

### **Objectives of the Research**

Objectives of the research are to examine or assess the impacts of Indonesia participation in various free trade agreements particularly in three aspects namely: (i) to examine the impact of free trade agreements on economic aspects specifically on: economic growth; export performances, import performances, balance of trade, terms of trade; investment (output of capital); inflation; government expenditure and consumption; and sectors output; (ii) to examine the impact of free trade agreements on social aspects especially on: labor market; wages; income gap of the labors; and social welfare; (iii) to examine the impact of free trade agreements on environment aspect particularly related to proliferation of green house emissions.

## **THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT**

Impacts of free trade (tariff reduction) on the national economy can be traced through price transmission from overseas exporters or domestic importers to domestic consumer or end users. The price transmission also can be used to detect whether channel distribution of price from overseas market to domestic market workings well. Price of imported goods that received by consumers not only influenced by import duty but also influenced by a lot of variables such as world price, import volume, foreign exchange rate, non-tariff barriers, and transportation cost (freight, insurance, handling cost). This research will assess impacts of tariff reduction on national economy, with assumption the other variables that affect price are constant, *ceteris paribus*, as well as there are no barriers for channel distribution in the domestic market.

Tariff reduction will lower import price proportionally and the lower import prices will be transmitted to distributors, user industries, or directly to retailers and finally go to end users or consumers. The consumers consist of individuals, households, firms, and government. If the price transmission works well, lower import prices will bring about lower consumer prices. Lowering consumer price will increase purchasing power of consumers then it will generate individuals and households' capability to consume more goods. Increasing consumption or demand of the goods will lead to expand the firms' productions. Increasing firms' productions could produce more profit and it also would have impacts on improvement of wages and enlargement of employments. In addition, if increasing employment of labor and wages occur across the labors both skilled labors and unskilled labors, they will contribute significantly to poverty alleviation and improve welfare.

Other pathway of price transmission is through channeling from importer prices goes to input industry prices. Lowering input prices for industries that produce goods whose import contents significantly, in particular, will bring about more competitive price of the goods both for domestic market and export market. Expanding exports will also induce firms' productions. Increasing the competitiveness of the firm added by expanded production due to increasing demand for domestic market and export market, would generate more investment to enlarge more productions. Improving investment, foreign trade, and domestic consumption would increase economic growth. Furthermore,

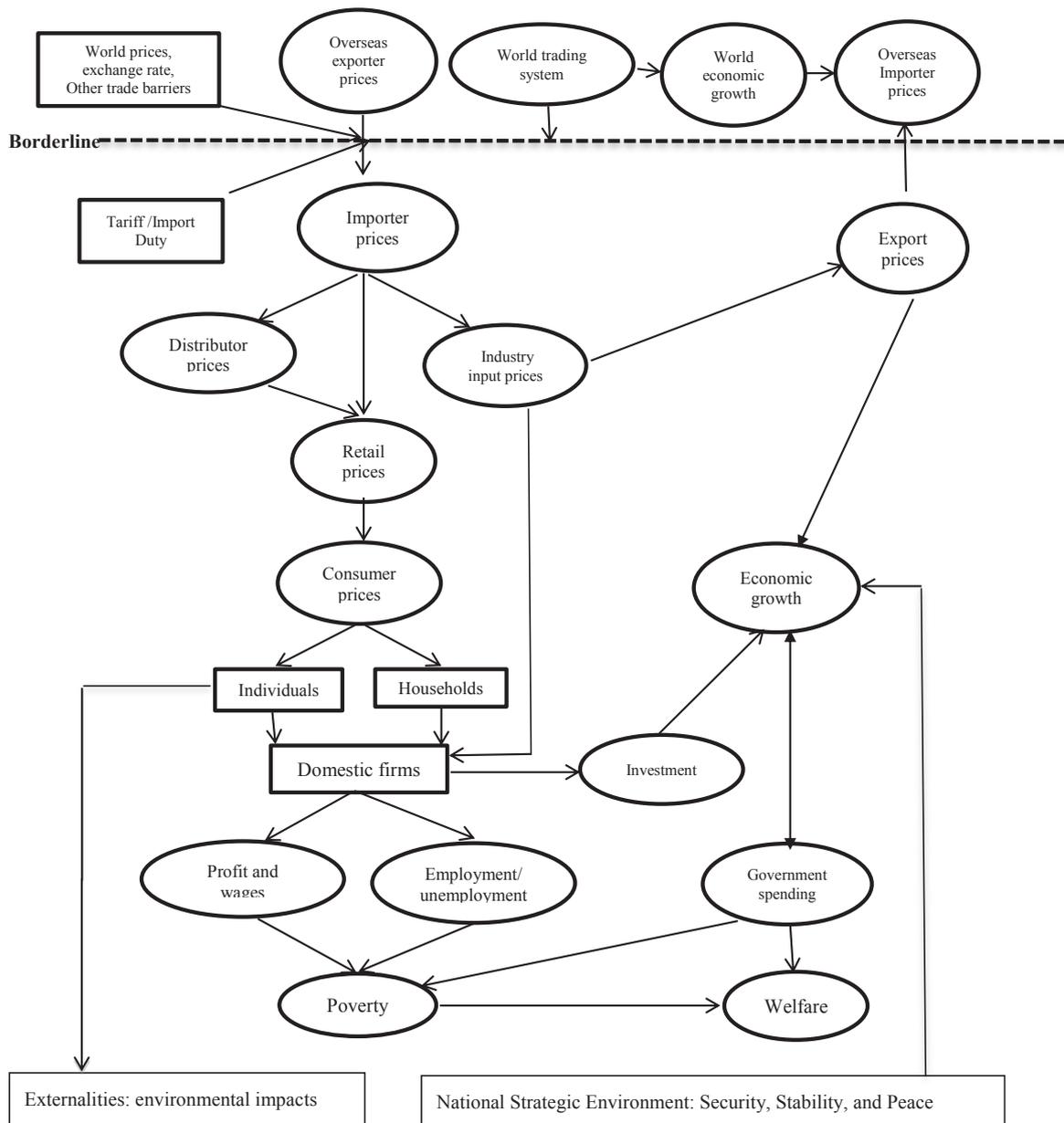
increasing economic growth will expand government spending that partly to support more poverty alleviation program.

Flow of goods both for exports and imports are also affected by world economic condition as well as world trading system. If the world economic condition is very conducive it will encourage both world exports and imports. In contrary, if the world economy is not favorable or sluggish it will discourage or decelerate exports and imports performance. Yet, both exports and imports also affect to the world growth. Other variable that also influences the world economy growth is world trading system or the multilateral trading system. The system governs the world trade particularly in order to smooth out flow of goods among the countries in the world and it is expected to generate world economic growth including economic growth of individual countries.

There are other factors may affect negatively or hinder to the economic growth and the factor is a national strategic environment that relates to security, stability, and peace. If the three factors are not controlled carefully and properly they will destroy or negate the economic growth. There are a lot countries have experienced their economic growth collapse because of domestic social conflict or divided societies (inequality, ethnic fragmentation, and the like) and weak institutions of conflict management such as the quality of institutions, rule of law, democratic rights, and social safety nets (Rodrik, 1998). Since there are a lot of countries experience zero or negative economic growth due to social and politic conflict that generate instability of the country, therefore, the national strategic environment is absolutely required to secure sustainability of economic growth.

Furthermore, expanding firms' production or output could have externalities problem (negative impacts) namely environmental damage such as greenhouse gas emission or pollutions on air, water, and others. Although the externalities could be positive for the society, but this research would analyze its negative impacts only. In the free trade agreement, the externalities effect has to be minimized. There is a suggestion that to integrate between trade and environment policies in order to obtain the gains of trade in the same time to achieve environmental protection. It is also suggested that Trade Related Environmental Measures (TREM) and Environment Related Trade Measures (ERTM) could be coordinated in coherent manner. It is necessary to undertake joint actions to reduce the environmental damage among parties of free trade areas (Thomassin, 2008: 71). The conceptual framework of free trade agreement impacts on the national economic performances can be illustrated in Figure 1.

Figure 1: Conceptual Frameworks of Free Trade Agreement Impacts on National Economy.



**Research Hypotheses**

There are two research hypotheses namely:

Participation of Indonesia in the free trade agreements will not automatically have a positive impact or improving economic performances particularly in the three aspects such as economic, social, and environment aspects.

Deepening trade liberalization (more tariff reduction) will not change pattern of the impact of free trade agreements in which the variables that affected negatively or positively has the same characteristic, namely if it affects variables negatively then it will be more negative and if it affects variables positively then will be more positive.

## METHOD

### Research Design

The research is quantitative research that would undertake research steps as follows: (i) to formulate research problem and research questions; (ii) to set up theoretical foundation, theoretical conceptual, and research hypotheses; (iii) to collect, to process, and to analyze the data; (iv) to conclude and recommend policy action as well as recommend further research. The research will utilize secondary data that consists of data from national and international institutions and data that available or embodied in the GTAP Model. Research sample consists of all free trade agreements that Indonesia participated in namely with ASEAN, China, Japan, South Korea, Australia/New Zealand, and India. Dependent variables consist of (i) economic aspect such as economic growth, export and import performances, terms of trade, investment, inflation, government expenditure and consumption, and output sector; (ii) social aspect that are labor market, wages, income gap of skilled and unskilled labors, and social welfare; (iii) environment aspect particularly on emission proliferation. Independent variables are tariff reduction of nine sectors that are agriculture, mining, forestry, fishery, processed food, textile and clothing, light industry, heavy industry, and services in the seven regions/countries. Measurement of dependent variables whether they are good or not based on theory refers to relationship between each variable and economic performances, whether positive or negative. However, same sign (positive or negative) variable cannot be interpreted with the same meaning to the economic performances.

### Method and Data Analysis.

Plummer (2010) introduced three methodologies to assess impacts of free trade agreements namely: a SMART Model, Gravity Model, and Computable General Equilibrium (the GTAP Model). The SMART Model is a partial equilibrium to estimate the potential economic effects of free trade agreement in a individual market. The Gravity Model is mainly to estimate trade flows not only in the context of free trade agreement but also the effect other agreement such as GATT-WTO membership, currency unions, migration flows, and foreign direct investment. While the GTAP Model is a general equilibrium approach and the most widely used computable general equilibrium to analyze trade policy that consists of multi-market namely market for final goods, intermediate goods, traded goods, and factors of production. Based on the three models, the research will analyze the impacts of the FTA on Indonesia economic performances employing method and instrument of the GTAP Model (8 version). The reason using the GTAP model is in the FTA negotiations always comprise the elimination of trade barriers (import duties) throughout several sectors at the same time and it only can be captured by the GTAP model. The Model also could disclose direct effect of tariff reductions in individual markets and indirect changes in related markets that could be quite complicated. The complexity includes increasing number of trade polies and markets involved in the free trade agreement. In addition, the GTAP Model could describe bilateral international trade, production, and consumption for entire economy.

## DISCUSSION

### Gross Domestic Products

Increasing Gross Domestic Products (GDP) or economic growth is a key important indicator of macroeconomic of the country. The economic growth could induce various national development activities. Any introducing policy action of economic development, one of the indicators whether the policy succeed or not is an economic growth. Therefore, one of the parameters to assess whether formation of free trade area succeeds or not is an economic growth or improving gross domestic products. In the first and second simulation, some regions have an experience differently, some countries experience decreasing, increasing, and do not change. There countries that experience increasing of the GDP namely Indonesia, ASEAN, and India. It means that, in general, trade liberalization does not contribute significantly to the economic growth of the country in the region.

Export Performances

In the first and second simulation, there are two countries experience decreasing price index of merchandise export namely Japan and India. While other countries experience increasing the price index that are ASEAN, China, Australia/New Zealand, and Indonesia that has the highest positive change. It seems that most of the countries do enjoy merchandise export prices from the FTA and it also can be concluded that the more trade liberalization would generate more price index for merchandise export. In the first and second simulation, all the regions, volume of exports before FTA and after FTA increased or positive change. Among the regions, Indonesia experiences the biggest increase of exports volume followed by India and ASEAN. It indicates that export competitiveness of Indonesia is more than export competitiveness of rest of the regions. In addition, increasing exports volume is bigger than increasing exports volume in the first simulation.

### Import Performances

In the first and second simulation, all regions experience increasing price index of merchandise import, in which India experiences increasing the highest price index of merchandise import followed by Indonesia. In the first and second simulation, most of the countries experience increasing in the volume of imports and only one country experiences negative or decreasing volume of merchandise import namely Japan. Indonesia experiences increasing imports volume relatively high followed by ASEAN and India.

### Terms of Trade

To calculate terms of trade, it will be computed the two indexes, namely index of prices received for tradeable goods and index of prices paid for tradeable goods. In the first and second simulation, there are five countries experience increasing index of prices received and other two countries (Japan and India) experience decreasing index of prices received. Among the members, Indonesia experiences more increasing (positive) of index prices received followed by ASEAN. The prices received for tradeable goods of Indonesia are greater than prices received for tradeable goods of other regions, so Indonesia gets more benefits prices received for tradeable goods. The index of

prices paid for tradeables goods, in the first and the second simulation, all regions experience positive change or increase at the post-FTA compared with pre-FTA, and India has experienced the highest increase followed by Indonesia. The data indicates that Indonesia has to pay more for tradeable goods compared with other regions (except India) and it will affect negatively to the terms of trade unless it is compensated by price received for tradeable goods. As stated before, the terms of trade is different between index of prices received for tradeable goods and index of prices paid for tradeable goods. If the prices received for tradeable goods is less than the prices paid for tradeable goods it will lead to the worsened terms of trade, in contrary, if the prices received for tradeable goods is more than the prices paid for tradeable goods it would lead to improving terms of trade. In the first and the second simulation, some regions experience positive terms of trade and some of the them experience negative terms of trade. In the first and second simulation, Indonesia experiences increasing the highest terms of trade followed by ASEAN and Korea, while other regions experience a negative terms of trade. In the case of Indonesia, the positive terms of trade caused by increasing index of prices received for tradeable goods is greater than the increasing index of prices paid for tradeable goods.

### **Balance of Trade**

Although the FTA may could promote both exports and imports but every country expected that increasing exports greater than increasing imports, so it would bring about a positive balance of trade. Improving the balance of trade would contribute positively to the economic growth. The first and second simulation shows that the regions experience a positive balance of trade only Japan and Indonesia, while other regions experienced a negative balance of trade. The balance of trade by sector, in the first and second simulation in every region experience a mixed namely positive and negative in some sectors. For Indonesia, there are four sectors that contribute positively to the balance of trade namely agriculture, mining, forestry, and fishing, while other five sectors contribute negatively namely textile and clothing, processed food, heavy manufacturing, light manufacturing, and services. Among the positive contributors, agriculture contributes the highest. The positive contribution of the sectors can compensate negative contribution of the sector, thus in general the balance of trade is still positive for Indonesia. In other regions that have negative balance of trade, the negative sectors are more dominant than the positive sectors such as in ASEAN, China, Korea, and Japan.

### **Investment.**

In the first and second simulation only one country namely Japan experiences a negative (decrease) output of capital goods (investment). While other six regions experience positive (increase) output of capital goods. The biggest increase is experienced by ASEAN followed by Indonesia. In the first and second simulation, Indonesia experiences increasing output of capital goods less than one percent. In the capital stock, the first and the second simulation only Japan experiences negative or decrease, while other regions experience positive in net rate of return on capital stock. For Indonesia, in the first and second simulation, the net rate of return on capital stock also increase and it increases fairly compared to other regions, it indicates that Indonesia is not less attractive to invest in capital stock compared with other region.

**Inflation.**

To calculate an inflation, the research computes three prices that could represent inflation rate of the country, namely price domestic goods to private household, domestic prices for commodity, and private consumption prices for commodity. Based on the computation, in the first and the second simulation, all regions mostly experience positive or increase in price domestic goods to private household of the sectors, except for Indonesia that all the sector experienced increasing. In the first and second simulation, domestic price for commodity in the regions are mostly decreasing except for Indonesia in which for all sector commodity prices increase. In Japan and India, all sectors experienced decreasing and some of them decreased significantly such as light manufacturing in Japan and processed food in India. All sectors in other regions such as ASEAN, China, Korea, and Australia/New Zealand also decreased except for services. Indonesia experiences increasing domestic prices more than other regions, it indicates that consumers of Indonesia gets less benefits from the FTA compared with other regions. Based on the computation of private consumption price for commodity, both in the first and second simulation almost have same results, namely Indonesia experienced decreasing two sector prices namely textile and clothing as well as light manufacturing, while other sectors increased and the highest increase is agriculture. While other regions experienced mixed namely some of the sectors increase and some of the sectors decrease. Based on the three parameter of prices, Indonesia experiences increasing prices in almost all sectors, it indicates that inflation rate of Indonesia tends to increase and it is not good for national economy in general and for consumers interest in particular.

**Government Purchases and Consumption.**

Government domestic purchases on commodities in every regions are different in magnitude subject to size of the government budget. The developed countries have more government budget than the developing countries. Japan expensed government domestic purchases highest than other regions followed by China and Australia/new Zealand. While Indonesia has the lowest the government domestic purchases. Most of the countries expensed the government domestic purchases for services. Government consumption expenditure is very important in the national economy that has function to stimulate economic growth including to create job opportunities particularly in developing country. Based on the computation, both in the first and second simulation, there are four regions experience positive or an increase in the government consumption expenditure, namely ASEAN, Korea, India, and Indonesia, while China, Japan, and Australia/New Zealand experience negative or decrease. Among the regions, Indonesia experiences the biggest increase from both in the first and second simulation. Thus, the government consumption expenditure of Indonesia could contribute more to the economic growth relatively compared to other regions.

**Sector Output**

In general, industry output in the regions both in the first and second simulation are mixed namely some of the sectors increase and some of them decrease. Yet, for Indonesia there are only two sectors an increase in industry output namely agriculture and services, while the seven sectors experience decreasing. Similar to Indonesia, Korea also experiences decreasing seven sectors and

only two sectors experience an increase namely textile and clothing as well as light manufacturing. The positive sectors indicate that they could have more gains from the FTA because they may be more productive. In contrast, the decrease in industry output of commodity may indicate that the sectors less productive. Based on the two simulations, Indonesia only gets benefit more (gainer) from two sectors namely agriculture and services, while other sectors gets less benefit (loser) namely mining, forestry, fishing, textile and clothing, processed food, heavy manufacturing, and light manufacturing, so the losers are greater than the gainers.

#### Labor Market

Employment is very critical issue from perspective of the FTA not only in the developing countries but also in the developed countries. Labors or association of labors often criticize or protest against formation of the FTA because they are afraid of losing jobs taken or replaced by foreign labors through increasing imported products come into the country. If the domestic industries cannot compete with imported products they could be collapse and the labors lose their jobs. Therefore, if there is a free trade agreement the labors always inquire a guarantee to the government that they will not lose their jobs. In the research, to assess the job opportunities utilizes a demand for endowment for use industry particularly on skilled and unskilled labors. In Indonesia, the first and second simulation demand for both skilled labors and unskilled labors increase only in the agriculture sector as well as skilled labor in services, while in other sectors decreased or negative. Deepening trade liberalization in the agriculture sector also leads to improving demand for skilled and unskilled labors, while demand in other sectors decrease more particularly in textile and clothing, processed food, as well as light manufacturing. Among the negative sectors, light manufacturing experiences the greatest decreasing for skilled labor and unskilled labor. Thus, in general the FTA does not contribute to increase demand for labor significantly.

#### Wages

There are three prices that could represent wages of employment namely market price index of primary factors, firms' price for endowment, and supply price of commodity. The primary factors of production include land, labor, and capital. There are two regions that experience negative or decrease in the market price index of primary factors namely in Japan and India, while other countries experience positive or increase both in the first and second simulation. Decreasing or increasing market price index of primary factors includes implicitly decreasing or increasing wages for labors proportionally. In the first and second simulation, Indonesia experiences increasing market price index of primary factors and it is assumed that labors both skilled and unskilled labors increase proportionally as much as the amount. Wages and employment are two sides of coin that cannot be separated in term of policy decision, but they have different in implication policy. Decreasing demand for labors means that some of them will lose the jobs and wages opportunity. Yet, decreasing wages, as far as the labors accept the relative lower wages they still have the job and wages. Therefore, lowering wages are not necessary to indicate losing the jobs as far as the labors are willing to receive the lower (prevailing) wages. Yet, firms' price for endowment commodity of Indonesia both in the first and second simulation for all sectors increase, except for natural resources in the sectors of forestry, mining, light manufacturing, and food processed. Among the endowment, skilled

and unskilled labors experience increasing prices (wages) higher than other endowments in average such as capital and natural resources, except natural resources for agriculture sector. The highest percentage price increase of endowment is land both in the first and second simulation. The data shows that increasing wages for unskilled labor is greater than increasing wages for skilled labor. It could narrow an income gap between the skilled and unskilled labors and it could contribute increasing the total income (wages) of the labors. Supply price of commodity by sector and region mostly increase, except for Japan that all sectors experience a decrease. In the first and second simulation, all sectors in Indonesia experiences increasing except for natural resources.

### **Income Gap of Labors.**

To assess impacts of the free trade area on income gap between skilled and unskilled labors utilizes two variables namely demand for labors and wages for labors. Increasing or decreasing the demand for labors and wages for labors could lead to decreasing and increasing wages or income total. The level of income could indicate whether the labors classified as poor people or not based on an applied poverty line. It would be assumed that increasing income of labors could contribute to poverty alleviation positively, in contrary, decreasing income of labors would increase poverty potentially. Demand for labor all sectors decrease except for agriculture but wages all sectors increase. Thus, there are two types of relationship between demand for labors and wages for labors in all simulation. The first type is demand for labors increase and wages for labor also increase, and the second type is demand for labors decrease but wages for labor increase. In the first type, income total of the labors could increase namely in the sector of agriculture. In the second type, income total of the labors could increase or decrease depends on the magnitude of decreasing demand for labor and increasing wages for labor. Thus, based on the data, it is not clear whether the FTA could contribute to poverty alleviation in all sectors except in agriculture sector. In addition, whether the FTA could narrow the income gap among the labors (skilled and unskilled labors) cannot be prejudged because magnitude of decreasing demand for unskilled labor and increasing wages compared to decreasing demand for skilled labor and increasing wages are vary.

### **Social Welfare**

Most of the countries both in the first and second simulation experience positive welfare namely Indonesia, ASEAN, South Korea, and India. While other countries that experience negative social welfare are China, Japan, and Australia/New Zealand. The highest change social welfare from the first simulation to the second simulation occurs in ASEAN followed by Indonesia. The data shows that impact of free trade area on welfare is mixed namely some countries experience a positive and others experience a negative of social welfare.

### **Emissions Proliferation**

To assess the impact of free trade area agreement on environment particularly for emissions proliferation, there are four sources of economic activities that produce emissions namely emissions from domestic products in current production, emissions from private consumption of domestic product, emissions from import in current production, and emissions from private consumption of

import. In the model there are three sector activities in producing emissions namely mining, heavy manufacturing, and services. There is a positive correlation between increasing capital output (investment) and emissions proliferation, in which increasing capital output would lead to increasing emissions production, in contrast, decreasing capital output would bring about decreasing emissions productions. Therefore, to assess the impact of free trade area agreement on emissions produced by domestic products has to calculate the output of capital, in which percentage change (increase or decrease) of capital output multiplied by existing emissions from domestic products. Result of the multiplication added by existing emissions from domestic products become emissions that impact of the free trade area agreement. Based on the first and second simulation, output of capital that experiences increasing only agriculture and services, while the seven sectors are decreasing namely mining, forestry, fishing, textile and clothing, processed food, heavy manufacturing, and light manufacturing. Therefore, only agriculture and services contribute increasing the emissions, in which activities that produce emissions in agriculture come from heavy manufacturing, while in the services come from mining activities.

## CONCLUSION

The research concludes that in general the impacts of free trade agreements still benefits for Indonesia economic performances in particular and it indicated by most of the observed economic variables improved although some of the variables deteriorated. The economic variables that experience a positive and improve supporting Indonesia economic performances are economic growth, export performances, terms of trade, balance of trade, investment, government consumption and expenditure, wages, and social welfare. While the variables that do not or less supporting to the economic performances namely import performances, inflation, output of sectors, labor market, income gap of labors, and environment. The conclusions are also in line with the previous studies that impact of trade liberalization and free trade agreement are mixed, some variables experience positive and others experience negative. The studies indicated that the countries whose benefits from the free trade agreements depend on readiness of the countries to carry out the domestic policy adjustment or the level of development.

### Policy Recommendation

For the purpose of maximizing the benefits of the free trade agreements, it would be recommended to the Government of Indonesia a policy actions as follows:

- (i) The government should undertake a economic and trade reform or domestic policy adjustment in order to create a more efficient economic and increase a competitiveness of Indonesia products in the world market in particular. In addition, the reforms also directed to comply with international trade rules or agreements that Indonesia committed.
- (ii) Before participation of free trade agreement or comprehensive economic partnership agreement, it is a must to undertake a deeply study (feasibility study) on cost and benefit as well as obligations and consequences mandated by the agreement particularly if it is related to the national interest. In

addition, the government should get the support from all of the stakeholders including members of parliament, business sectors, and non-government organization.

- (iii) The agreement will bring about some of the business sectors as gainers and some of the as losers. The government should undertake a necessary policy actions to assist the losers in particular, in which they are usually small scale business enterprises, to improve their competitiveness, so they are not out of business due to the free trade agreements.
- (iv) To optimize the benefits of free trade agreements the government should undertake actively to socialize the outcome of any free trade agreements to the related business communities.

### **Recommendation for further research**

The research analyzes impact of free trade agreement only limited to trade in goods using shock parameter of reduction or elimination of import duties and using static model. The free trade agreement or comprehensive economic partnership agreement consists of not only limited to trade in goods but also including various sector agreements include trade in services, investment, intellectual property, competition, and sustainable development. Each agreement has different impacts on the national development, and the impacts of the agreements are more deeply rooted in various sectors of the national economy and development. Thus, the further research is recommended to undertake a research to explore the impacts of various sector agreements on national economic and development employing a dynamic model instead of static model that could include impacts assessment in the long-run.

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