

# The Possibility of Indonesia and United Kingdom to Form Free Trade Agreement After Brexit

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**Abstract—** On June 23, 2016 held a referendum which resulted decision that United Kingdom or Britain determined to exit the European Union membership that we call Brexit. The exit of UK will absolutely impact UK's trade with its trading partner including Indonesia. In connection with this issue we conducted a study to evaluate the possibility for trade cooperation between Indonesia and the UK with assumption that UK had officially left the European Union. By having the Game Theory model, the best strategy for Indonesia is by forming FTA with UK. Meanwhile for UK, based on the simulation, the alternative in forming FTA with Indonesia is the dominant strategy with positive output. The trade cooperation implication is not too significant for UK, so to drive the trade cooperation must be initiated from Indonesia.

**Keywords—** *Brexit, Free Trade Agreement, CGE model*

## I. INTRODUCTION

On 23 June 2016, the people of the United Kingdom (UK) voted to leave the European Union (EU). The vote resulted a referendum that Britain will exit the EU that we called Brexit. The UK government make sure that brexit will bring a successful and independent future for UK outside the EU (HM Government, 2017). The outcome of the UK's referendum on membership of the European Union (EU) will shape the future of the country's relationship with its largest trade partner – the EU -as well as other trade partner around the world. Some opinion suggests that EU membership has benefited UK economy since membership of the EU has reduced trade cost between UK and the rest of Europe (Harvey and Hubbard, 2016; Kierzenkowski et. al, 2016; Dhingra et. al, 2016). Thus, leaving the EU will give some losts to UK, one of the factors is the risks from uncertainty following the referendum (Steinberg, 2019).

A number studies analyze that Brexit possibly will increase as well as decrease welfare and trade with the European Union (Dhingra et al., 2016; Ebell et al., 2016; Baker et al., 2016). Some also argue that Brexit provide the opportunity for the UK to regain regulatory sovereignty and a relief from overly burdensome EU regulations (Booth et. al.,

2015; HM Government, 2017). This would be advantageous to the UK economy since UK has independence to negotiate new trade agreements with third countries (Busch and Metthes, 2016). However, the bargaining position to UK is relatively lower than if negotiating as a part of EU since the UK is only able to offer a smaller market than the EU.

The United Kingdom has been Indonesia's strategic partner. Diplomatic relation between the two countries has been managed for 70 years (Indonesia's State of Secretary, 2016). Trade value between both countries reached USD 2.6 billion in 2018, while investment from Britain in Indonesia reached more than USD 12 billion in the same year. United Kingdom is the 10<sup>th</sup> biggest investor in Indonesia. The fact that United Kingdom leave EU will affect trade performance between them and also to the world. Moreover, it will shift UK's international trade policy with their partner, both main partner and potential partner. The form of the policy can be as maintaining EU as FTA trade partner and expanding bilateral trade cooperation with their potential trade partner. The research objective is to elaborate the potential bilateral cooperation between Indonesia and UK and how big the impact of having it, both for Indonesia and UK. This research will enrich researches focusing on International trade especially researches discuss economic integration also and use GTAP analysis as a tool analysing the impact of international trade cooperation.

## II. METHODOLOGY

To assess the economic cost and benefit regarding the possibility trade agreement between Indonesia and UK after brexit, this study uses Game Theory and a Computable General Equilibrium (CGE) model with the employment of Global Trade Analysis Project (GTAP) Database (Version 9.0) and using GTAP standard model. GTAP database version 9 use three reference year (2004, 2007, and 2011) and we use the latest year (2011) as the reference year for this research.

The GTAP is CGE model that provide with multi-region and multi-sector with by default consist of 140 regions, 57



Indonesia in the various sectors such as food crops, plantations, food industry, mining, housing, industrial areas and offices, warehouse transportation and telecommunications (BKPM, 2019). On the UK point of view, Indonesia is an attractive investment destination compared to other ASEAN countries. It is evident from the higher value of UK FDI stocks in Indonesia from Malaysia and Thailand in 2012.

**B. The UK's Challenges in Brexit Negotiation**

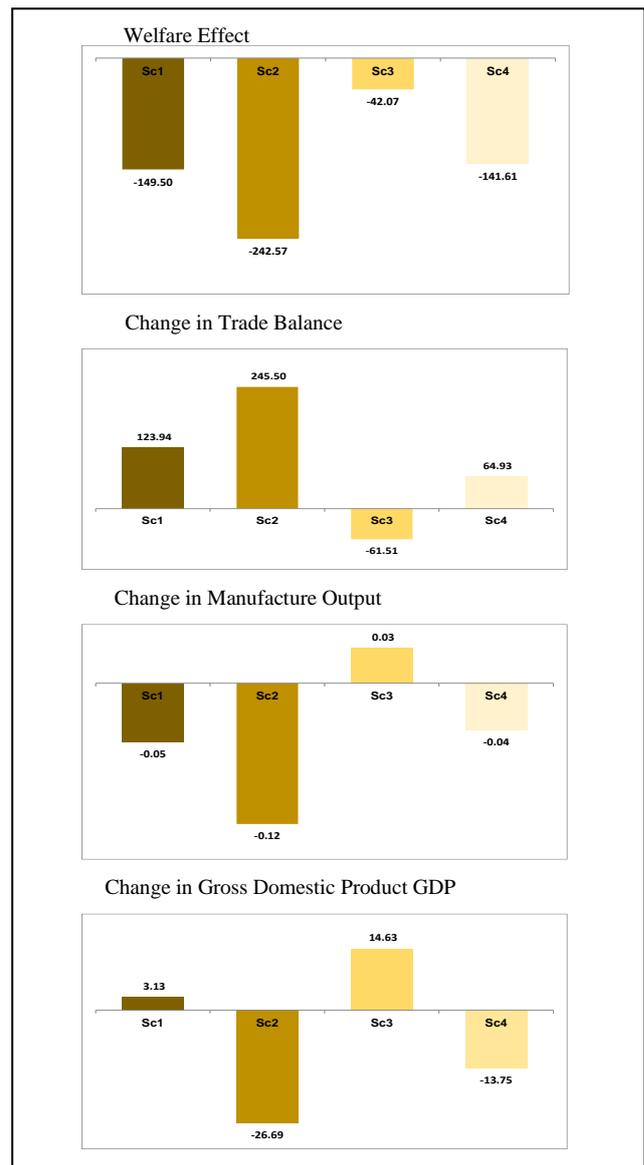
Although the UK and the EU have expressed their desire to achieve mutually satisfying results and negotiate with good intentions, the negotiation process remains full of difficulties and challenges due to the complexity that arises from Britain's exit (Ian, 2016). The Brexit process will involve renegotiating 759 agreements with third countries (McClean, 2017). There are two phases in the negotiation process that need to be resolved. The first phase will focus on three main issues that form the basis of the Brexit agreement, namely EU citizens' rights in the UK and vice versa, the Irish border, and Britain's financial obligations towards the EU as a consequence of Brexit (Wright N., 2017). The agreement reached between the UK and EU Chief Negotiator Michel Barnier has paved the way for the second phase of relations between the UK and EU after Brexit (European Commission, 2017).

However, the process of going to that stage still has many challenges due to a variety of sensitive issues covering these three main issues. In the early stages, Britain's financial obligations towards the EU appeared to be one of the tough challenges until finally the United Kingdom agreed to pay € 50 billion to the EU as part of the agreement to issue Britain (Rettman, 2017). In addition, issues related to the Irish border are also a serious challenge for the development of negotiations, especially on the side of economic impact because around 80% of Irish land transportation must go through the UK (Posaner & Livingstone, 2017). In overcoming this, the United Kingdom promised to make the border smooth and without obstacles as much as possible (HM Government, 2017). However, on the other hand the United Kingdom promised to withdraw from the EU Single Market and Customs Union system (Posaner & Livingstone, 2017). Furthermore, the UK is also faced with the potential impact that will affect the Belfast (Good Friday Agreement) and vulnerable political conditions in Northern Ireland (Leahy & Minihan, 2017).

In addition, the Brexit negotiation process is also faced with the possibility of no agreement between the UK and the EU, or referred to as the 'No Deal' scenario (Ross & Ross-Thomas, 2017). This will make relations with key UK partners in Europe increasingly difficult because of the uncertainty of Britain's legal position in trade partner relations with the EU (House of Commons Foreign Affairs Committee, 2017). Then, this condition will also influence the reputation and credibility of the UK in the international eye (Usherwood, 2017). In addition to mitigating various possible risks, the UK's foreign policy makers in the Foreign and Commonwealth Office (FCO) are also hampered by the domestic context because negotiations are managed and carried out by the Department for Exiting the European Union (DExEU) and the coordination process carried out by the UK government in facing all possibilities (House of Commons Foreign Affairs Committee, 2017).

**C. Economic Potential Effect from Trade Cooperation**

This research uses CGE simulation to measure the possible effect that might occur if Indonesia and United Kingdom raise bilateral trade cooperation by liberating their import tariff. The simulation is limited to trade in goods with cross-border mechanism by eliminating all tariff from tradeable products. The macro economy variables used in the simulation are welfare, trade balance, industry output, service output, and total economic change represent by PDB change for each country. Those macro indicators are counted as aggregate effect nationally not bilaterally. For instances, the change of trade balance explained in figure 2 is total trade balance for each country as a result of cooperation formed between Indonesia and United Kingdom.



Source: GTAP Simulation

Fig. 2. GTAP Simulation Results to Indonesian Economy

Figure 2 gather results from CGE simulation capturing Indonesian economy which executed using GTAP version 9. Label Sc1 refers to DEAL Scenario alternative 1 (DEAL and UK forming FTA with Indonesia), Sc2 refers to DEAL Scenario alternative 2 (DEAL and UK not forming FTA with

Indonesia), Sc3 refers to DEAL scenario alternative 3 (NOT DEAL and UK forming FTA with Indonesia), and Sc4 refers to DEAL scenario alternative 4 (NOT DEAL and UK not forming FTA with Indonesia).

In DEAL scenario, If Indonesia forming FTA with UK, Indonesia will experience GDP increment about USD 3.13 million, an increase of USD 123.9 million of trade balance. The welfare will suffer as much as USD 149.5 million and industry output will reduce for about USD 50 thousand. But when Indonesia not forming FTA with UK, Indonesia will risk for the downfall of GDP for USD 26.7 million, welfare and industry output will suffer more in this scenario. But, Indonesia will gain trade surplus reaching USD 245.5 million.

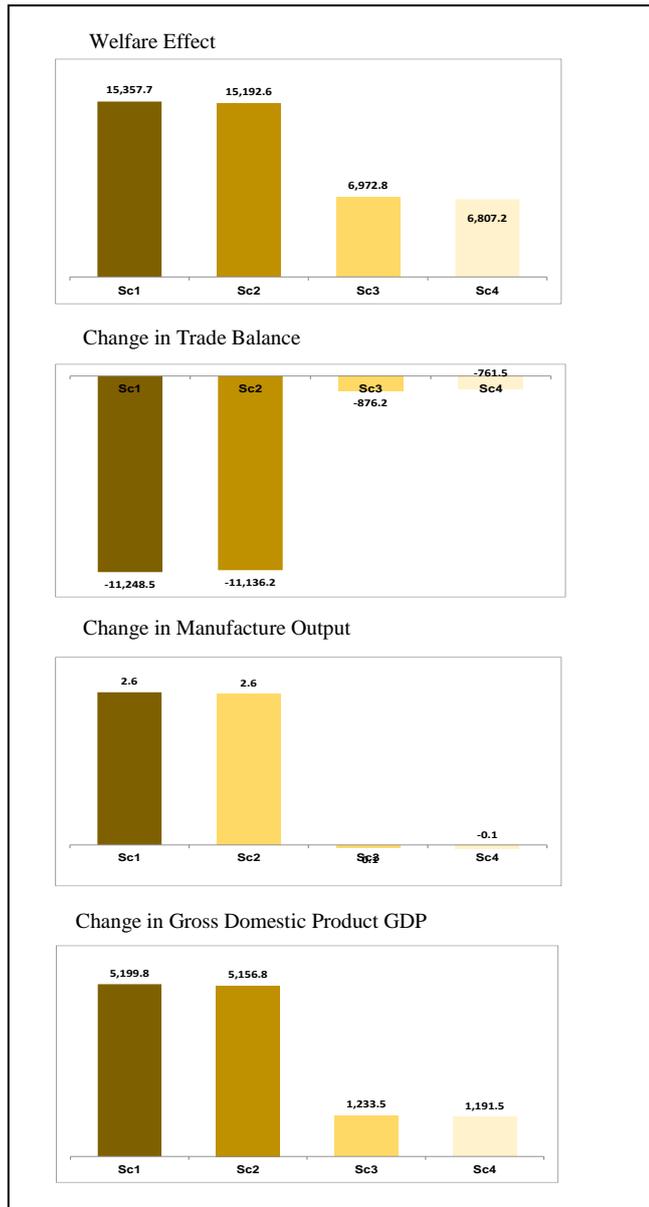
welfare will reduce for USD 42.1 million and Indonesia will experience output increment for about USD 30 thousand. In NOT DEAL scenario, if UK not forming FTA with Indonesia, then Indonesia will be suffer from it because there will be a bigger trade diversion compared with if UK forming FTA with Indonesia

Figure 3 shows the simulation result for UK economy. In all simulation scenario, UK will have welfare increment as an effect of trade cooperation (FTA). In contrast, Indonesia's welfare will suffer from it. In DEAL scenario, UK will have the worst effect related to their trade balance, but for industry output and PDB increase, UK will experience a bigger benefit rather than in NOT DEAL scenario. By looking at figure 3, scenario DEAL definitely will give UK benefit.

By seeing through both scenarios, any alternatives that UK made, by forming trade cooperation with all their trade partners including Indonesia, will take UK to have better economic implication. Forming trade cooperation Indonesia, will give slight differences for each UK's macroeconomic indicators. It happens because the limited trade practices with Indonesia made the economic implication after trade cooperation is formed become less significant for UK.

D. Best Alternative

The simulation result from fourth scenario give implications to each country. In fact, each country will decide the best alternative from all alternatives. This research use game theory approach to predict dominant strategy of alternative that might be chosen by each country. Assumption used is the decision that each country made using prisoner dilemma assumption. The players in prisoner dilemma are Indonesia and UK. Two pay off matrix will be use having two scenario in each, they are DEAL and NOT DEAL. The game alternative for DEAL scenario is simulation Sc1 and Sc2. The game alternative for NOT DEAL scenario is simulation Sc3 and Sc 4. Pay off function used in this game are PDB change resulted from GTAP version 9.



Source: GTAP Simulation

Fig. 3. GTAP Simulation Results to UK Economy

Furthermore, in NOT DEAL scenario, if UK forming FTA with their trade partners, including Indonesia, Indonesia will gain GDP increase as much as USD 14.6 million. But Indonesia trade balance will suffer for USD 61.5 million,

TABLE I. PAY OFF MATRIX FROM SCENARIO DEAL

		UK			
		Sc1	Sc2		
Indonesia	Sc1	3.13	5,199.8	3.13	5,115.8
	Sc2	-26.7	5,199.8	-26.7	5,115.8

Based on Table I, the dominant strategy to Indonesia in DEAL scenario is forming trade cooperation with UK. Meanwhile for UK, the dominant strategy is forming trade cooperation with Indonesia.

TABLE II. PAY OFF MATRIX FROM SCENARIO NOT DEAL

		UK			
		Sc3	Sc4		
Indonesia	Sc3	14.63	1,233.5	14.63	1,191.5
	Sc4	-13.75	1,233.5	-13.75	1,191.5

Based on Table II, the dominant strategy to Indonesia in NOT DEAL scenario is forming trade cooperation with UK. Meanwhile for UK, the dominant strategy is also forming trade cooperation with Indonesia. Moreover, Game Theory approach conclude that in any scenario, the dominant strategy for both countries is forming trade cooperation.

#### IV. CONSLUSION AND POLICY IMPLICATION

The research concluded that trade cooperation leverage after Brexit with UK is feasible and will give benefits to Indonesia compared to if Indonesia not forming trade cooperation with UK. GTAP simulation resulting that In DEAL scenario, If Indonesia forming FTA with UK, Indonesia will experience Gross Domestic Product (GDP) increment about USD 3.13 million, an increase of USD 123.9 million of trade balance. The welfare will suffer as much as USD 149.5 million and industry output will reduce for about USD 50 thousand. For UK, any alternatives that UK made, by forming trade cooperation with all their trade partners including Indonesia, will take UK to have better economic implication. Having the game theory model, the best strategy for Indonesia is by forming FTA with UK. Meanwhile for UK, based on the simulation, the alternative in forming FTA with Indonesia is the dominant strategy with positive output. The trade cooperation implication is not too significant for UK, so to drive the trade cooperation must be initiated from Indonesia. EU tend to formed trade cooperation with their partners with *Economic Partnership* scheme, so it might be adopted by UK when they forming trade cooperation with Indonesia. EU tend to formed trade cooperation with their partners with *Economic Partnership* scheme, so it might be adopted by UK when they forming trade cooperation with Indonesia.

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