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FROM PROTECTIONISM TO TRADE WARS: THEIR EFFECTS OBSERVED THROUGH FINANCIAL MARKETS

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ABSTRACT

Even the outcomes of free trade are well known and accepted widely in economic literature, protectionism has never totally lost its ground. Today, the protectionist trade policies of the US are transformed into a trade war. The costs accrued by the outcomes of a trade war would be extensive. These costs have been materialized via 2018 tariff hikes to a certain extent but the remaining impacts– in case of an escalated trade war- could be excessive. The trade war would also lead to certain consequences via financial markets. The present study aimed to analyze how protectionism evolved into a trade war and its ample effects that would be observed through financial markets. The study demonstrated that global uncertainty would scale up as a result of trade conflicts between nations. The rising global uncertainty would have remarkable consequences for both developed and developing countries via financial markets.

Key Words: *Protectionism, Trade War, Tariffs, Uncertainty, Financial Markets.*

JEL Codes: *F02, F10, F13.*

KORUMACILIKTAN TİCARET SAVAŞLARINA: FİNANSAL PİYASALAR ÜZERİNDEN ETKİLER

ÖZET

Serbest ticaretin üstünlüğü ekonomi yazınında ne kadar kabul edilmiş olsa da korumacılık hiç bir zaman tam olarak ortadan kaybolmamıştır. Bugün ise ABD'nin uyguladığı korumacı ticaret politikası ticaret savaşlarına evrilmiştir. Ticaret savaşlarının maliyeti oldukça fazladır. 2018 boyunca uygulanan tariflerin maliyetleri zaten ortaya çıkmıştır ancak ticaret savaşının derinleşmesi ile birlikte çok daha fazla maliyetin ortaya çıkacağı beklenmektedir. Ticaret savaşının bu maliyetlerinin yanında finansal piyasalar üzerinden maliyetleri de olacaktır. Bu çalışma korumacı ticaret politikasının ticaret savaşlarına nasıl evrildiğini açıkladıktan sonra ticaret savaşının finansal piyasalar üzerinden ne gibi maliyetler yüklediğini analiz etmektedir. Çalışmada ulaşılan sonuçlara göre ticari gerilimler arttıkça

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belirsizlik artmaktadır. Artan belirsizlik ise finansal piyasalar üzerinden hem gelişmiş hem de gelişmekte olan ülkelere ilave maliyetler yüklemektedir.

Anahtar Kelimeler: *Korumacılık, Ticaret Savaşı, Tarifeler, Belirsizlik, Finansal Piyasalar.*

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1. INTRODUCTION

Free trade has improved global wealth and welfare via efficient production rested upon international specialization. This argument is widely accepted since it was first propounded by Adam Smith in 18th century and became one of the main themes in the liberal economic order. However, the protectionist ideas, that were rooted in Mercantilism, have never faded away. In certain periods, protectionist trade measures were reintroduced by politicians- especially after economic crisis. Policy makers seek to protect their national industries from foreign competition to make them recover quickly from crisis.

Since 1980s, worldwide trade has expanded further with rising globalization due to advances in telecommunication and transportation technologies. The global wealth and welfare have also expanded. However unfortunately, the gains of free trade have not been distributed fairly. Thus citizens – especially the ones in the lower-end of the income distribution- have reacted both to globalization and free trade. The election of the D. J. Trump as the president in the last quarter of 2016, with his mostly nationalistic ideas in foreign policy and trade, was a consequence of this reaction.[1]

Protectionist ideas have increased after the Global Financial Crisis as expected, however with inauguration of the new US president, these protectionist measures were transformed into a trade war especially between the US and China. After early 2018, Trump government have imposed tariffs on several industries and specifically on Chinese products. He utilized the bilateral trade deficit with China as an argument to impose these tariffs. In fact, the trade deficit is the outcome of US's own macroeconomic policies rather than unfair trade practices. US economy depends on consumption. The saving rates in the US are extremely low when compared to those of its trade partners. Thus, the gap between saving and investment is filled by foreign saving. That eventually led to a trade deficit.

The most frightening fact, is the probability that a trade war could spill over to other nations and industries similar to the trade war that was experienced after the Great Depression. The trade and economic growth were hampered enormously with the tariff hikes in that period. Today, the world is more interconnected when compared to that area. Through Global Value Chains (GVC), parts of production are outsourced to various countries. Furthermore, financial connections are more complex today. Thus, the cost of trade war would probably be devastating than ever.

[1] The election of nationalist governments in European countries and the Brexit decision in UK referendum are also among the consequences of the same reaction.

The cost of trade war was analyzed in certain papers (Amiti, et.al.,2018; Furceri et. al., 2018, Fajgelbaum, et.al.,2019, WEO,2019, etc.). These studies usually took into account the direct effects. The present study aimed to shed a light on the indirect effects that would be observed through financial markets. These effects are more important when compared to the direct effects since they could be greater than expected and probably would last longer. With this aim, the economics of protectionism was initially analyzed. Then protectionism was discussed in a historical context and how it changed after the Global Financial Crisis was explored. Historical analysis was followed by the investigation of how protectionism evolved into a trade war. Next, the evidence on financial repercussions of trade tensions were addressed. Finally, the last section was devoted to concluding remarks.

2. ECONOMICS OF PROTECTIONISM

Free trade expands the production possibility frontier. According to this view, independent of your trade partner's actions, free trade is the best choice. However, Johnson (1953) famously demonstrated that a country could decrease import prices and increase welfare by imposing tariffs. This type of tariff is called "optimal tariff" (Rodrik, 2018: 80). The optimal tariff is usually propounded as a suggestive argument for protectionism.

Certain other –economical or political- arguments could also be proposed to favor protectionism. One popular argument is related to domestic employment. Rising imports due to free trade leads to employment of foreign labor instead of the domestic one. This argument is mainly supported by populist politicians. However, with free trade, resources would flow to the most productive industries due to their comparative advantages. In this transformation, employment could tail off. However, it is the task of the government to impose fiscal policy in order to direct the unemployed workforce to other industries (Yılmaz and Divani, 2018:14, Zandi et al., 2019:14). According to Baldwin (2018), in the 21st century, governments should protect the employees rather than the jobs. In this vein, fiscal policy should be devoted to retrain and reorient the unemployed to other industries in the economy.

Another argument is related to the national security. Countries have to protect the industries that are vital for the wellbeing of nations- such as war industry. This argument could only be suggested for certain industries and should not be the reason for rising protectionism (Zandi et al., 2019).

There are other arguments that favor protectionism such as the infant industry argument. The industries should be sheltered from fierce foreign competition when they are newly established. They could not compete with foreign rivals before they get matured. This argument is widely supported by developing countries since their industries are younger when compared to developed nations.

On the other hand, there are numerous counter-arguments that could be advocated against protectionism. The main one is the proposition that protectionism leads to inefficient allocation of resources. Which in turn would lead to a lesser growth and welfare in the long-run. Lack of international

specialization would increase production costs. Furthermore, as international competition would decrease, mark-ups and market power would rise. Eventually, the prices would also rise.

As a result of protectionism, certain industries would increase their profits at the expense of the general public. Thus according to Adam Smith, protectionism is the result of rent-seeking producers' successful lobbying activities (ECIPE, 2010: 8). In spite of these caveats of protectionism and the virtue of free trade is well known and accepted since the 18th century, protectionism had never been fully abandoned. Especially, after the economic crises, protectionist measures play their role in rescue programs.

3. PROTECTIONISM IN A HISTORICAL CONTEXT

Protectionism is rooted in mercantilist philosophy. According to mercantilism, the wealth of a nation is the sum of the nations' precious metals such as gold and silver. The aim of the government is to increase its precious metal holdings and this could only be achieved through trade surplus. In this vein, governments should try to restrain imports with tariffs and promote exports[2]. Furthermore, according to the mercantilist idea, the amount of global wealth is constant. If a country has a trade surplus, other country ought to give a deficit which also means that a trade is a zero-sum game. The mercantilism was popular in the 17th century. With the industrial revolution and the liberal economic ideas of Adam Smith, protectionism lost serious ground.[3]

In the 18th and 19th centuries, rising liberal ideology led to the acceptance of the odds of the free trade. Globalization had risen and free trade flows were evident. However, during Great Depression- after World War I- Smooth- Hawley tariffs were passed by the US Congress in 1930 in order to protect farmers against foreign competition. This was resulted a 40-48 percent tariff increase in nearly 900 products.[4] These tariffs were not welcomed by other nations, thus they retaliated in return. The global trade was reduced tremendously- nearly 65 percent (Williams, 2019:704). According to Eichengreen and Irwin (2010), these tariffs made the crisis last longer. Furthermore, according to historians, these tariffs – and the conflict between the nations due to these tariffs- paved the way for the World War II.

After the WWII, nations due to the lesson they learned during the interwar years, were eager to take collaborative steps. They began multilateral trade negotiations and the *General Agreement on Tariffs and Trade (GATT)* was signed in 1947.[5] The aim of GATT was to ensure free trade among the

[2] Studies that analyze the 1874-1913 (before the World War I) found that the tariff rates and economic growth rates were positively correlated (Bainoch, 1972; O'Rouke,2000) which meant that levying a tariff could increase economic wellbeing. According to Eichengreen (2019), this contrasting result could not be generalized, this is only related to the market distortions of the economies.

[3] With industrial revolution, the mass production became pravelent. The problem in that period was to find a market for these products. Thus, countries had to open their borders to these goods. The countries, where the industrial revolution led to a mass production, were the opponents of free trade.

[4] See Galbraith (2009) for details of Great Depression.

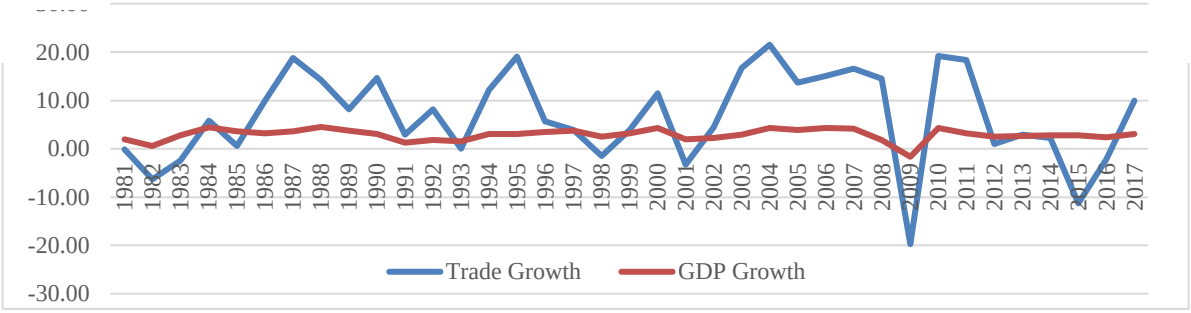
[5] The other colloborative step in that period was Bretton-Woods agreement. With Bretton Woods agreement, countries formed new world monetary order. IMF and World Bank (International Bank of Reconstruction and Development, IBRD) were also the products of Bretton Woods – collobarative steps.

nations and to improve trade and growth as a result. Under the umbrella of GATT, nations negotiated and reduced their trade barriers.

GATT was a successful platform in reducing tariffs. However, countries did not fully abandon protectionist ideas. After the oil crisis in the 1970s, US firms –especially in the automotive industries- lost their competitiveness due to price hikes. The US government was not able to increase tariffs to protect the industry since GATT does not allow the tariff increases. In this vein, US government persuaded the Japanese government to restrain automotive industry's exports. This was called Voluntarily Export Restraint (VER) and without rising tariffs, this helped to protect the US automotive industry (Krishna, 1989).[6] This development opened a new era on trade relations: countries did not increase bilateral tariffs but found another measures to restrict trade. In the 1980s, new measures were introduced to the toolkit: safety and health standards, national procurement, etc. Anti-dumping and counter-veiling duties were also started to be used as protectionist measures. These measures are called *new protectionist measures*.

In 1994, GATT was converted into the World Trade Organization (WTO) - an institution with a secretariat. Under WTO, countries negotiated tariffs in organized rounds and they were able to reduce them. They also had a chance to apply to the Dispute Settlement Body to overcome trade conflicts with their trade partners.[7] WTO helps to reduce trade barriers and with the help of technological advances in telecommunication and transportation, trade and economic growth spurred globally (see Figure.1).

Figure.1 Trade Growth (%) and Economic Growth (%, 1981-2017)



Source: UNCTAD and own calculations.

As seen in the Figure.1, when the trade growth increased economic growth followed suit. In case of a trade relapse -as in 2009- the economic growth had also shrunk. It is also evident in the figure that trade growth is positive generally. This indicates that the multilateral trade system has been able to increase trade globally. Between 1980 and 2007, trade increased seven fold. The average tariff rates

[6] The reason for Japanese voluntarily acceptance of the restraint was the gains obtained with the rising prices. The US government had threatened the Japanese government with increasing tariff rates. If the US government had increased tariffs, tariff revenue would be transferred to the US government, however when Japan exporters rose their prices their selves the revenue generated would go to the Japanese exporters (Krishna, 1989).
[7] GATT also had a dispute settlement mechanism but the dispute settlement body –under WTO- is an amended version of the former.

applied had also decreased form 30 percent to under 10 percent. The global tariff rates around the world reduced but the trade barriers were not. Nations had to use other measures to protect their industries more frequently, especially after crises.

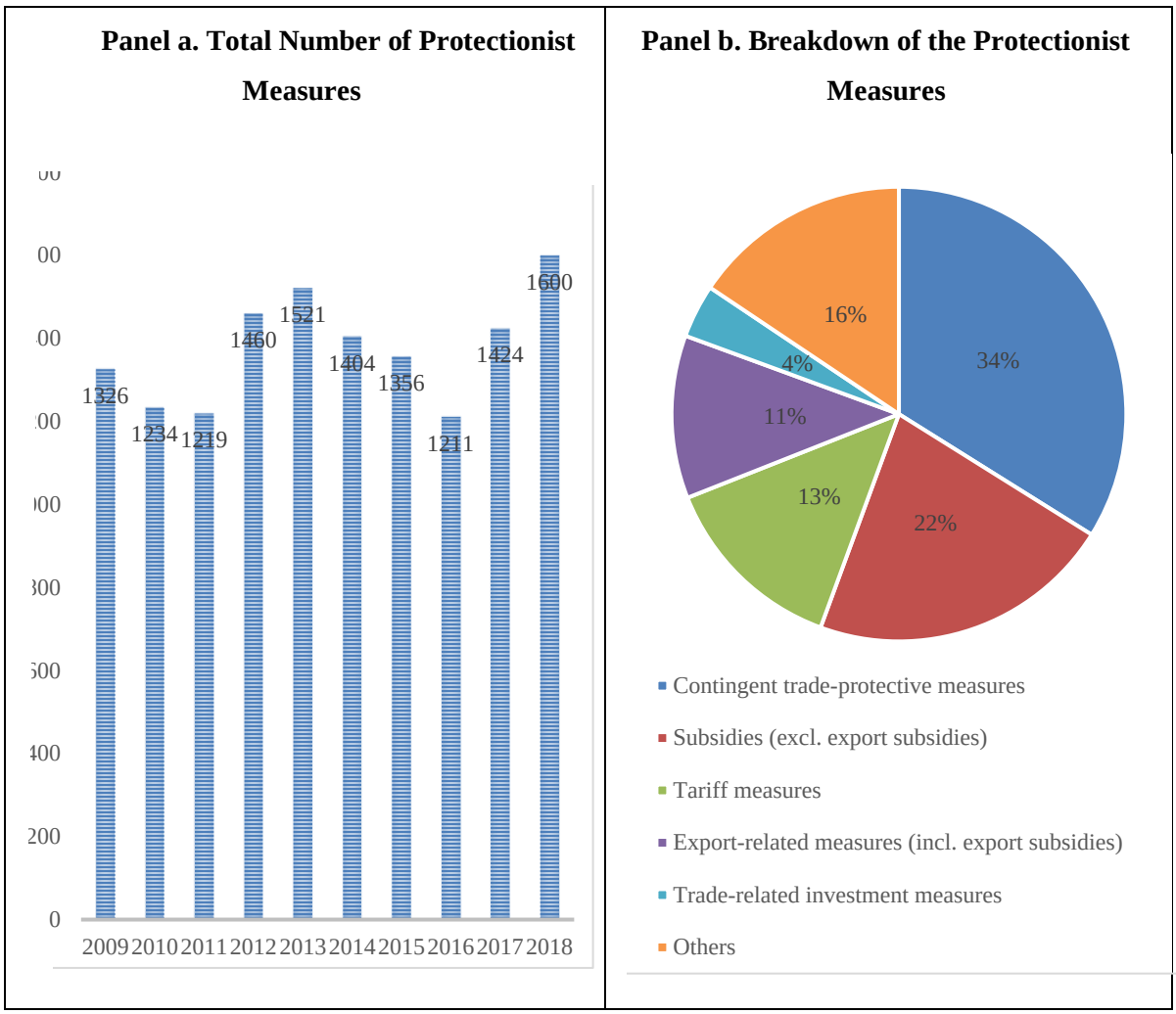
3.1. After the Global Financial Crisis: The Rise of Protectionism

In August 2007, the crisis began in the sub-prime mortgage market in the US and it evolved into a full-fledged global financial crisis with the fall of Lehman Brothers. The confidence disappeared and counterparty risk emerged. The trade and financial flows came to a halt. In 2009, the volume of trade sunk tremendously. Governments were engaged in financial rescue operations and initiated fiscal stimulus programs. They switched from liberal to interventionist policies. Thus, they introduced protectionist measures, to provide a cure only in their national industries.

In October 2008, A Recovery and Reinvestment Act was introduced in the US. The act led to a stimulus however it was conditional on buying US goods- *Buy American*. Similar fiscal stimulus programs conditioning on buying domestic goods had also been used in Indonesia, Australia and China (UNCTAD, 2010:6). However, these programs were not against the WTO regulations.[8] In the US, EU, Japan and China, governments bailed out certain institutions and stipulated generous guarantees. These are all deemed protectionist measures that were applied to domestic firms and provide incentives for the domestic firms against foreign competitors.

[8] Obama's approach to these protectionist measures was more balanced. For example, he initiated the Buy American regulation in Recovery and Reinvestment Act in 2009, however initiated the Buy American parallel to the regulations of WTO on government procurement. He levied an anti-dumping tax on Chinese goods but he also started the negotiations for Trans-Pacific Partnership Agreement six weeks later (ECIPE, 2010:15).

Figure.2 Protectionist Measures Implemented after The Global Financial Crisis (2008-2018, World Total)



Source: Global Trade Alert

It is evident in the Panel a. Figure.2 that, countries pursued various protectionist measures after the financial crisis. Anti-dumping or counter-veiling tax is considered in contingent trade-protective measures and it is the frequently used as a protectionist measure. The state aids that were provided after the financial crisis were in the subsidies (excl. export subsidies), thus subsidies are the second frequently used protective measure as expected (Figure.2 Panel b.). The countries that mostly implemented these protective measures included the US, Germany and India. After Trump took the office, the protective measures increased in the US.

4. A NEW ERA IN TRADE: TRADE WARS

Trump built his campaign on "Make America Great Again" slogan. He promised American electorates, to keep the jobs in the country through his ideas favoring protectionist trade policy. He won the election in 2016, and took the office on January 2017. He kept his word and began to implement protectionist trade policy measures.[9]

First, he announced that the US would leave the Trans Pacific Partnership agreement[10] and he started an investigation on trade relationships under NAFTA.[11] He asserted more serious policy measures in 2018. On January, the US initiated tariffs on solar panels and washing machines. This move affected a small section of the imports. Then, a more striking move came on March 2018. The US government announced tariffs on aluminum and steel[12]. Certain countries were exempted from these tariffs for a certain period of time however the exemptions terminated on June 2018.[13] Next, the US imposed tariffs directly on Chinese products on July 2018 claiming that China had unfair trade practices in technology transfers, intellectual property rights and innovation. US imposed tariffs on the products that amounted $34 billion on July and $16 billion on September 2018. Furthermore, on September 2018, Trump announced a tariff increase on Chinese products that amounted $200 billion again due to the same reason.[14] China also retaliated after every US move. China increased the tariffs on $121 billion worth of trade in total (Amiti et. al.,2019: 26).

In sum, the US tariffs that were imposed on Chinese products have risen on average from 3 percent to 12 percent. China's average tariff rates on US products have also risen from 10 percent to 18 percent (Bown, 2019:2). According to Devarajan et.al (2018), these trade disputes affected the global trade by 2.5 percent.

There are certain arguments that could justify these tariff increases by the proponents of these policies. First, Trump attempted to decrease the record high US trade deficit. The US trade deficit variations are presented in Figure.3. The bilateral trade deficit with China was $375 billion in 2017. In order to lower the trade deficit, Trump attempted to decrease bilateral deficit with China. He blamed Chinese government on unfair trade practices and tried to correct these practices by imposing tariffs.

[9] US has utilized protectionist measures in certain industries. Between 2001 and 2017, US investigated 130 dumping and 69 subsidy cases and implemented 103 anti-dumping and 55 counter veiling duties. The average anti-dumping duty was 151.5 percent and counter veiling duty was 72.4 percent. The mostly investigated industries were steel, aluminum and plastics (Bown, 2019:9).

[10] The remaining 11 countries that signed Comprehensive and Progressive Agreement for Trans Pacific Partnership (CPTPP) agreement.

[11] Trump attempted to renegotiate NAFTA. He firstly levied a duty on steel and aluminum. Then enacted an exemption to NAFTA members. Mexico wanted to renew the deal. US and Mexico agreed on a new agreement restricting certain auto imports from Mexico and adding certain articles that deterred US firm investments in Mexico. Then the same agreement was approved by Canada. The new agreement between US, Mexico and Canada was called The US-Mexico-Canada (USMCA) Agreement (Ertürk and Yilmaz, 2018:25).

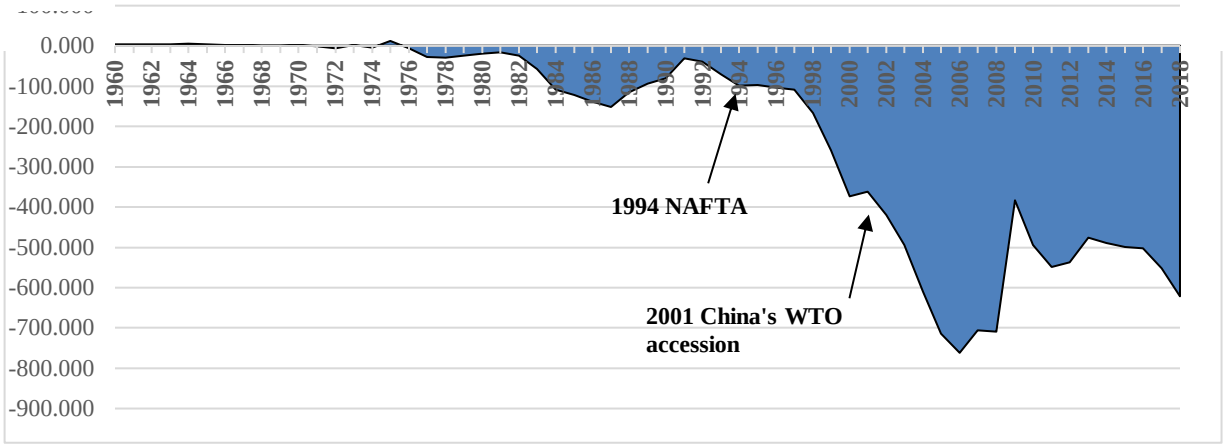
[12] 10 percent on aluminum and 25 percent on steel.

[13] These countries were Mexico, Canada and EU countries. The total aluminum and steel exports of these countries amounted to $22 billion (Amiti et. al., 2019:26). Turkey also exports these products to US and was affected by these tariffs. The steel exports are 6 percent of the total exports and the steel exports to the USwas 1.5 percent of the total exports (Babacan, 2018).

[14] For the timeline for tariff increases see https://piie.com/system/files/documents/trump-trade-war-timeline.pdf.

However, trade deficits are the consequences of macroeconomic imbalances as simply explained in macro economy textbooks. Trade deficit reflects the imbalance between savings and investments. In 2017, the gross savings/GDP ratio in the US was 19 percent, while it was 47 percent in China. Investment/GDP ratio was 21 percent in the US and 44 percent in China. WEO (2019) revealed that trying to decrease the trade deficit by repressing the bilateral one is nonsense without correcting macroeconomic imbalances. This would only divert trade to other countries.[15] According to Sachs (2019), the record deficit in 2018 was the product of 2017 tax reductions. Tax reductions decreased the savings and led to additional deficit in trade balance.[16]

Figure.3 The US Trade Balance (Million $, 1960-2018)



Source: Fred Data, St. Louis FED

Second, as seen in the Figure.3, with the accession of China to the WTO, the increase in the US trade deficit accelerated. Before the WTO accession, the imports of US from China was 10 percent of total imports. In 2014, share of China in total imports reached 20 percent. However, the share of US in Chinese imports decreased from 10 percent to 8.5 percent during the same period (Bown, 2019: 5). It was clear that, China's trade with the US have expanded over years. However, rather than WTO accession, the triggering factor was switching to normal trade relations with China. On October 2000, the US government initiated a Permanent Normal Trade Relationship (PNTR) with China. Before PNTR, the tariff rates were also low similar to those implemented on other countries, however, these rates had to be ratified by Congress every year. Tariff rates could be increased from 4 percent to 37 percent if the ratification process failed (Crowley, 2019:13). Thus, PNTR faded away the uncertainty of rising tariffs. The firms in both countries easily engaged in bilateral trade activities. According to Handley and Limao (2017), the one third of the trade increase between 2000 and 2005 was due to the disappearance of this uncertainty. On the one hand, Chinese firms increased their production due to low-

[15] Some of the restricted trade was diverted to the India and Turkey under the Generalized System of Preferences (GSP). This system was created to increase the trade between the US and developing countries. However, in order to prevent diversion to these countries, first Turkey and then India were removed from the system as these countries were sufficiently developed.
[16] According to Sachs (2019), this period resembled Reagan Administration's supply-side economics. Reagan reduced tax rates and according to the author this was the main cause of the trade deficits during 1980s.

wage labor and on the other hand, US firms engaged in labor saving technologies[17] in order to compete with Chinese firms (Crowley, 2019:15).[18]

Third, the tariff rates implemented by China were 40 percent on average in 1990s, in 2003 these were decreased to 10 percent. In 2017 the average was about 8 percent. However, it was still above the average US tariff rates. This was also propounded as an argument favoring protectionist policies by the US government. Bagwell and Steiger (2013) named this problem as a "latecomer's problem". Since China entered WTO later than other nations, the initial tariff rates of China were higher. Since the WTO process requires gradual decline, China's tariff rates were higher when compared to those implemented on other trade partners'.

Not only the US has trade disputes with China. Other countries also experienced conflicts with China especially about subsidies and state- owned enterprises.[19] The EU and Japan wanted to renegotiate WTO regulations on subsidies and problematic state-owned enterprises (Rubini, 2019:89). According to Wu (2016), the Chinese economic model creates problems when entering the world trade system. But WTO's multilateral trade system could not handle these problems (Matoo and Staiger, 2019:33). In this vein, the US government proposed the inability of WTO to overcome Chinese subsidies as a reason for fierce protectionist policy.

Whatever the reason, the trade war and these tariff hikes hit the US economy the most. According to Amiti et. al. (2019), the tariffs imposed during 2018 cost to the US $1.4 billion per month and $165 billion annually.[20] They also added that, the effects would be larger when the effects on global value chains and financial markets are considered. Fajgelbaum et. al. (2019), estimated the cost by calculating the elasticities. They found that the net effect of tariff increases was $7.8 billion, 0.04 percent of the annual income of the US.

The real concern about these tariff hikes and retaliations, was the possible contamination of these tariffs to the other industries and countries and similar to the one that started with the Smooth- Hawley tariffs. According to the WEO (2019), since the world is more integrated today when compared to the 1930s, the effect of trade war would be more devastating. Ossa (2015) predicted that the worldwide trade revenue is a quarter of global GDP. If the countries were engaged in a trade war, much of these revenues would disappear.

[17] The employment is decreased 17 percent in manufacturing sector between 2000 and 2003 (Crowley, 2019:14).
[18] US and UK have a comparative advantage on services sector, while China, South Korea have a comparative advantage on manufacturing sector in 1994. They have specialized on these sectors. In services sector US has a trade surplus with respect to China (WEO, 2019).
[19] China has an over capacity in steel production and US government insisted on that the US firms have come up with unfair practices in China. Furthermore, as the US companies have to be engaged with state-owned enterprises according to Chinese foreign investment laws, US blamed China on stealing technology (Yalçın et. al., 2018:63).
[20] Trump has been aiming to keep the jobs in the country while raising tariffs. 35 000 jobs vanished in aluminum and steel industry in ten years. This means that a single job saved is cost $195 000. For instance, the regular employee earns $52 000 in a year (Amiti, et. al., 2019:14).

The cost of an intense trade war was analyzed using simulations in several papers (Rutherford et. al., 2018, Devarajan, et. al., 2018, Ossa, 2019, Berthou et. al., 2018, Freund et. al., 2018, Zandi et.al.,2018). All studies reached a similar conclusion: a trade war would be very costly for all nations. But the most effected nations would be the US and China. Within national boundaries, Fajgelbaum and Khandewal (2016) argued that rising protectionism would hurt mostly the ones on the lower-end of income distribution- in the US: the opponents of Trump![21]

5. THE EFFECTS THROUGH FINANCIAL MARKETS

As discussed in the previous section, the effects of protectionist policies –including tariff increases and trade war- could be substantial. Furthermore, most previous studies did not consider the effects of trade wars that could be observed in financial markets. When the financial repercussions are taken into account, the cost is multiplied.

Globalization leads to a decline in inflation all over the world. Trade has a pivotal role in the fall of prices. As nations compete in international markets, the competition becomes more intense. The labor costs should be reduced in order to gain competitiveness. Countries either suppressed the wages or improved their productivity through innovation (Carstens, 2018:4). Nevertheless, protectionism would reverse the achievements of globalization and free trade. Inflation would rise as well as the market power. For instance, the price of steel rose after the implementation of the tariffs. Since it is an important input in manufacturing and construction industries, the prices in these industries would also increase (Carstens, 2018:5). In these circumstances, inflation would be evident initially in the US which in turn would be exported to the other countries. Handley and Limao (2019) predicted a 2 percentage point increase in inflation.

Jordan (2018) illustrated these tariff increases as a supply-side shock, similar to the oil crisis. Supply- side shock curtails the production while rising prices. This makes it difficult to pursue monetary policy. An expansionary monetary policy would cure production but deteriorate inflation. A contractionary monetary policy would restrain the inflation but the production would fall. In the US case, this would be more problematic. An increase in policy rate would appreciate the dollar and boost the trade deficit as a result. If the FED would cut back the policy rate, the dollar would be depreciated. This would increase the competitiveness of the US firms but inflation would rise. The US firms would gain competitive advantage as a consequence of a weak dollar, but this would be followed by the US's trade partners. This could turn to be a currency war with rising inflation all over the world. The reduction in stock prices would end up with poor demand via wealth effect.

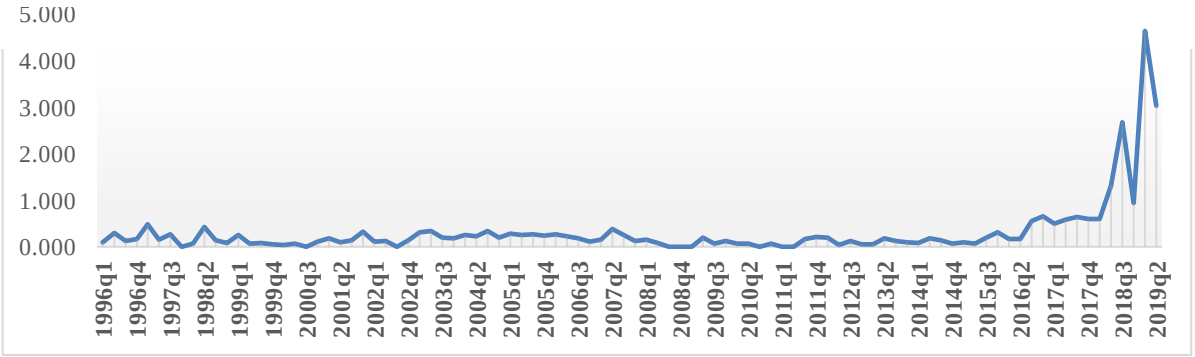
High import prices due to tariff hikes means high input prices and high production costs in certain industries. This would lead to a decline in profits in these industries (see Dizoli and Van Roye, 2018;

[21] Autor et.al. (2017) also found that the political polarization increases in the regions where the import competitive industries are located.

Zandi et.al., 2018). Certain multinational companies such as General Electric and General Motors announced a fall in their expected profits (Huang et. al., 2019:70). Furthermore; as a result of a rise in worldwide inflation, cost of borrowing would increase. This would eventually lead to a drop in stock prices (Dizoli and Van Roye, 2018:4).

The above-cited arguments were the direct effects of rising protectionism- or namely the trade war. Furthermore, the most striking indirect effect is the rising global uncertainty. In Figure.4, the world trade uncertainty index is presented. This figure demonstrates an uncertainty in trade since 1996. It is evident in the figure that the uncertainty in trade has never reached the values experienced in 2018 before. Uncertainty began rising in early 2017. However, the first peak was observed in the third quarter of 2018- when trade tensions skyrocketed between US and China. When the US and China came together to talk about trade, the uncertainty index declined (December 2018), then rose again with the failure of the negotiations to reach a deal. Thus, a rise in global uncertainty would affect all financial markets by altering the risk factor in decision-making processes of economic agents.

Figure. 4 World Trade Uncertainty Index (1996-2019)



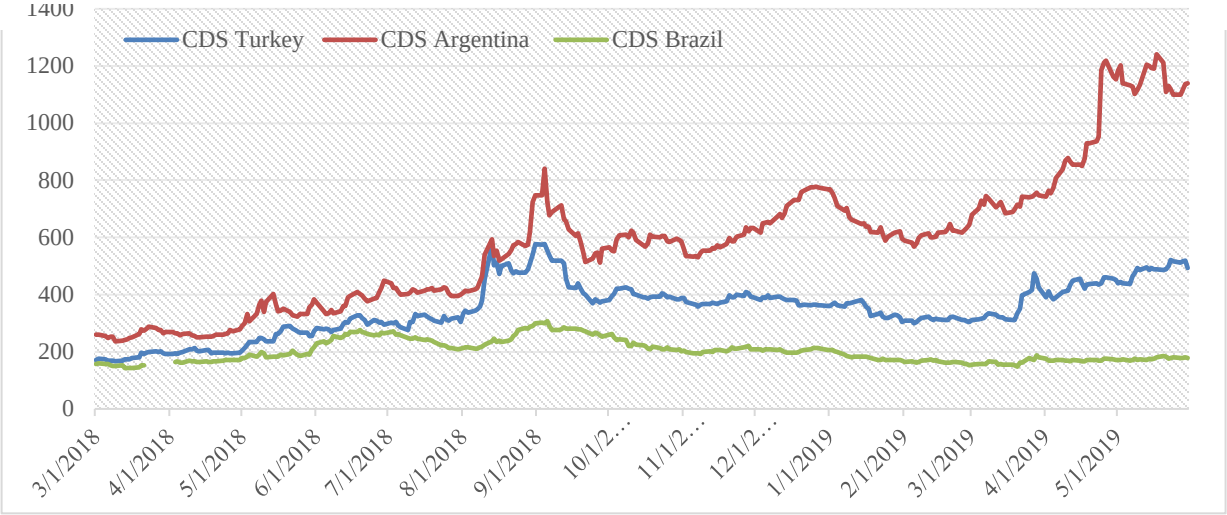
Source: www.policyuncertainty.com

Increasing uncertainty would affect the economies through different channels. First, portfolios would shift to safe heaven currencies such as dollar, euro, yen, etc. This would also mean a capital outflow from emerging markets (Dizoli and van Roye, 2018). Developed countries' currencies would be appreciated against the developing countries' currencies. This would in turn lower the developing countries' import demands, which would also mean lower export demands for advanced countries' products. Thus the global trade would slow down as a result. On the other hand, depreciation of developing countries' currencies would increase foreign-currency denominated debt burden. These countries would be considered risky and their bond spreads would probably mount up (Carstens, 2018:7). This would lead to a credit crunch in these countries; and investment, production and employment would decline in this vein. Furthermore, a fall in income would lead to a fall in export demands for advanced countries' products. Finally, global demand and income would deplete.

It could also be observed in Figure.4 that, after September 2018 trade related uncertainty also mounted up. This proved that even the trade war is between the US and China, the global uncertainty

rises and the developing countries are deemed risky. This also demonstrated that if trade tensions scale up in the future, developing countries' risks would also escalate. This would in turn lead to a capital outflow from these countries. In Figure.5, CDS spreads of some developing countries bonds -Turkey, Argentina and Brazil- are presented. The spreads increased to a degree on March 2018- due to a tariff rise on aluminum and steel. But the striking escalation was experienced after the trade tensions rose between the US and China after September 2018.

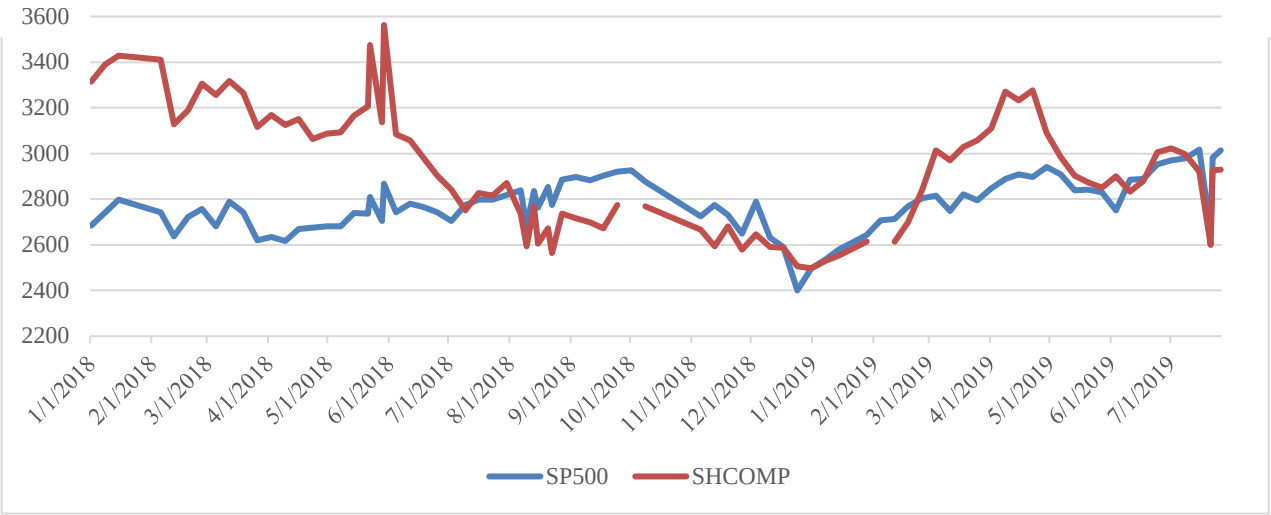
Figure.5 CDS Spreads of Developing Countries Bonds (5 years)



Source: Bloomberg

Second, as global uncertainty rises, firms would delay their investment decisions. The production of capital goods would decrease as a result. This would also lead to a decline in production and employment (Zandi et.al. ,2018: 6). The expectation of a decline in production as well as profits dwindled the stock markets. As seen in the Figure.6, both Chinese and US stocks decline with trade loss expectations. It is important to note that not only Shanghai Composite Index declined with the escalating trade war between the US and China but also Standard & Poor's 500 Index declines after September 2018. This shows that the trade war would have consequences both for the US and China and this argument was well understood by the financial markets.

Figure.6 Stock Markets Indexes (Standard & Poor's 500 Index and Shanghai Composite Index)



Source: Fred Data, Federal Reserve Bank of St. Louis and Bloomberg

Third, rising global uncertainty would also have effects on global value chains. The rising global uncertainty would change production destinations. Global value chains would probably get shorten (Blanchard, 2019:59). This means that foreign direct investments would drop. According to Zandi et. al. (2018), this would take time since the existing investments require time to be transferred to other locations or entirely to countries of origin. This would also mean a rise in production costs through global value chains. These firms seek locations where a particular part of production would be possible at a lower cost.[22] Reversing this process with rising uncertainty would mean rising production costs, increasing global prices, cut back in investments and reducing employment. Furthermore, global value chains also necessitate complex financial products such as derivatives (Carstens, 2018:5). This creates a complicated financial nexus. If global uncertainty would rise further, the financial tensions would probably lead to a credit crunch all over the world as a result.

6. CONCLUDING REMARKS

Free trade coupled with globalization downsize the production costs and decrease the worldwide inflation. Economic welfare is enhanced as a result. However, free trade and globalization could not lead to a prosperity in a fair income distribution. This creates opponents of globalization- and free trade. This protesting attitudes are associated with protectionism in the post-financial crisis era and evolved into a trade war.

Free trade (and investment) with globalization also changed the economic structures. A product is manufactured on several countries via global value chains. Furthermore, newly industrialized countries such as China and India were integrated at a higher level in the trade system. Multilateral trade

[22] See Baldwin (2016) for the details of global value chains.

system failed to deal with new problems. The arguments favoring tariff hikes are intentionally grounded on these deficiencies.

Tariff hikes –or trade wars- have important costs, some of these were materialized as a product of 2018's tariffs. However, the expected costs – even if the trade war would escalate- are enormous. Trade wars have important consequences for financial markets demonstrated in the present study. First, as production costs increase with tariff hikes, inflation would also increase globally and implying monetary policy would be problematic. Certain countries would prefer inflation and a depreciated currency, while others would prefer lower inflation and an appreciated currency. Since depreciated currency would lead to a competitive advantage for the country, the others could also intervene in the foreign currency market to depreciate their currencies. In this case, currency war would accompany to the trade war. This would reduce global GDP further.

Second, global uncertainty would also rise with trade tensions. Global uncertainty would impair financial markets. As analyzed in the present study, developing countries are considered risky and funds would probably fly to safe heavens. This would depreciate developing country currencies. If these countries have huge foreign currency denominated debt, this would make them riskier in the eyes of foreign investors- thus more capital would fly to safe heavens. Depreciation of the currencies would increase the burden of foreign currency denominated debt. Furthermore, with the ingrained uncertainty in financial markets, finding funds would be more difficult. This process could end with a debt crisis in a worse-case scenario.

Third, national stock markets would slack as a result of losses in industries that heavily effected from tariff upsurges. This would also diminish aggregate demand through the wealth effect. These effects would also be observed in developed countries. Furthermore, with the poor foreign demand of developing countries, the income and employment in the developed ones would further decrease.

Bearing in mind these costs, it is better to avoid trade war and try to promote free trade. However, trade tensions seem to have reasons beyond economic one. These include politic reasons such as the struggle of the US to maintain hegemonic power by weakening trade partners. Thus, developing countries- like Turkey- should be ready for unfavorable trade consequences of the political decisions. We should be aware of the financial repercussions of these trade wars. In order to abate the unfavorable consequences of the credit crunch, developing countries should implement the required measures to cushion foreign currency denominated debt.

REFERENCES

Acemoglu, D. and Zilibotti, F. (1997) "Was Prometheus Unbound by Chance? Risk, Diversification, and Growth", Journal of Political Economy, 105(4): 709-751.

Aghion, P., Howitt, P. and Mayer-Foulkes, D. (2005) "The Effect of Financial Development on Convergence: Theory and Evidence", The Quarterly Journal of Economics, 120(1): 173-222.

Ahmad, N. and Wyckoff, A. (2003) "Carbon Dioxide Emissions Embodied in International Trade of Goods",OECD Science, Technology and Industry Working Papers, No. 2003/15, OECD Publishing.

Arellano, M. and Bond, S. (1991) "Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations", The Review of Economic Studies, 58(2): 277-297.

Arellano, M. and Bover, O. (1995) "Another look at the Instrumental Variable Estimation of Error-Components Models", Journal of Econometrics, 68(1): 29-51.

Bencivenga, V. R. and Smith, B. D. (1998) " Economic Development and Financial Depth in a Model with Costly Financial Intermediation", Research in Economics, 52(4): 363-386.

Bimonte, S. (2001) "Model of Growth and Environmental Quality. A New Evidence of the Environmental Kuznets Curve", A New Evidence of the Environmental Kuznets Curve, University of Siena Economics Working Paper (321)

Blackburn, K. and Varvarigos, D. (2005) " Growth, Uncertainty and Finance", Centre for Growth and Business Cycle Research Discussion Papers, 48: 1-24.

Blundell, R. and Bond, S. (1998) "Initial Conditions and Moment Restrictions in Dynamic Panel Data Models", Journal of Econometrics, 87(1): 115-143.

Bond, S. R., Hoeffler, A. and Temple, J. R. (2001) "GMM Estimation of Empirical Growth Models", CEPR Discussion Papers/Centre for Economic Policy Research Discussion Papers.

Boyd, J. and Smith, B. (1996) "The Coevolution of the Real and Financial Sectors in the Growth Process", The World Bank Economic Review, 10(2): 371-396.

Capelle-Blancard, G. and Laguna, M. A. (2010) "How Does the Stock Market Respond to Chemical Disasters?", Journal of Environmental Economics and Management, 59(2): 192-205.

Chang, S. (2015) "Effects of Financial Developments and Income on Energy Consumption", International Review of Economics and Finance, 35: 28-44.

Charfeddine, L. and Khediri, K. B. (2016) "Financial Development and Environmental Quality in UAE: Cointegration with Structural Break" ,Renewable and Sustainable Energy Reviews, 55: 1322-1335.

Čihák, M., Demirgüč-Kunt, A., Feyen, E. and Levine, R. (2013) "Financial Development in 205 Economies, 1960 to 2010", National Bureau of Economic Research, (No. w18946).

Cole, M. A. (2004) "Trade, the Pollution Haven Hypothesis and the Environmental Kuznets Curve: Examining the Linkages", Ecological Economics, 48(1):71-81.

Copeland, B. R. and Taylor, M. S. (2004) "Trade, Growth, and the Environment", Journal of Economic Literature, 42(1): 7-71.

Dasgupta, S., Laplante, B. and Mamingi, N. (2001) "Pollution and Capital Markets in Developing Countries", Journal of Environmental Economics and management, 42(3): 310-335.

Frankel, J. A. and Rose, A. K. (2005) "Is Trade Good or Bad for the Environment? Sorting out the Causality", Review of Economics and Statistics, 87(1): 85-91.

Frankel, J., and Rose, A. (2002) "An Estimate of the Effect of Common Currencies on Trade and Income", The Quarterly Journal of Economics, 117(2): 437-466.

Greenwood, J. and Jovanovic, B. (1990), "Financial Development, Growth, and the Distribution of Income", Journal of Political Economy, 98(5, Part 1): 1076-1107.

Greenwood, J., Sanchez, J. M. and Wang, C. (2010) "Financing Development: The role of Information Costs", American Economic Review, 100(4): 1875-91.

Grether, J. M. and Mathys, N. A. (2010) "Measuring the Pollution Terms of Trade with Technique Effects", Development, 5.

Grossman, G. M. and Krueger, A. B. (1993) "Environmental Impacts of a North American Free Trade Agreement", Garber P.(eds.), The US-Mexico Free Trade Agreement, MIT Press, Cambridge, MA, 1655177.

Grossman, G. M. and Krueger, A. B. (1995) "Economic growth and the Environment", The Quarterly Journal of Economics, 110(2): 353-377.

Harrison, A. E. and McMillan, M. S. (2003) "Does Direct Foreign Investment Affect Domestic Credit Constraints?", Journal of international Economics, 61(1): 73-100.

Hurlin, C. and Mignon, V. (2007) "Second Generation Panel Unit Root Tests",

Imbs, J. (2004) " Trade, Finance, Specialization, and Synchronization" , Review of Economics and Statistics, 86(3): 723-734.

Imbs, J. (2007) "Growth and Volatility", Journal of Monetary Economics, 54(7): 1848-1862.

Jalil, A. and Feridun, M. (2011) "The impact of Growth, Energy and Financial Development on the Environment in China: a Cointegration Analysis", Energy Economics, 33(2): 284-291.

Knapp, T. and Mookerjee, R. (1996) "Population Growth and Global CO_2 Emissions: A Secular Perspective", Energy Policy, 24(1): 31-37.

Kumbaroğlu, G., Madlener, R. and Demirel, M. (2008) "A Real Options Evaluation Model for the Diffusion Prospects of New Renewable Power Generation Technologies", Energy Economics, 30(4): 1882-1908.

Lanoie, P., Laplante, B. and Roy, M. (1998) "Can Capital Markets Create Incentives for Pollution Control?", Ecological Economics, 26(1): 31-41.

Larrain, B. (2010) "Stock Market Development and Cross-Country Differences in Relative Prices", The Review of Economics and Statistics, 92(4): 784-797.

Levine, R. (1999) "Financial Development and Economic Growth: Views and Agenda", The World Bank.

Li, Y. and Hewitt, C. N. (2008) "The Effect of Trade Between China and the UK on National and Global Carbon Dioxide Emissions", Energy Policy, 36(6): 1907-1914.

Maddala, G. S. and Wu, S. (1999) "A Comparative Study of Unit Root Tests with Panel Data and a New Simple Test", Oxford Bulletin of Economics and Statistics, 61(S1): 631-652.

Millimet, D. L. and Roy, J. (2011) "Three New Empirical Tests of the Pollution Haven Hypothesis When Environmental Regulation is Endogenous", IZA Discussion Paper, No.5911.

Painuly, J. P. (2001) " Barriers to Renewable Energy Penetration; a Framework for Analysis", Renewable Energy, 24(1): 73-89.

Sadorsky, P. (2010) "The impact of Financial Development on Energy Consumption in Emerging Economies", Energy Policy, 38(5): 2528-2535.

Sadorsky, P. (2011) "Financial Development and Energy Consumption in Central and Eastern European Frontier Economies". Energy Policy, 39(2): 999-1006.

Salahuddin, M., Gow, J. and Ozturk, I. (2015) "Is the Long-Run Relationship Between Economic Growth, Eectricity Consumption, Carbon Dioxide Emissions and Fiinancial Development in Gulf Cooperation Council Countries robust?", Renewable and Sustainable Energy Reviews, 51: 317-326.

Selden, T. M. and Song, D. (1994) "Environmental Quality and Development: Is There a Kuznets Cuurve for Air Pollution Emissions?", Journal of Environmental Economics and Management, 27(2): 147-162.

Shahbaz , M., Solarin, S. A., Mahmood, H. and Arouri, M. (2013) " Does Financial Development Reduce CO_2 Emissions in Malaysian Economy? A Time Series Analysis", Economic Modelling, 35: 145-152.

Shahbaz, M., Shahzad, S. J. H., Ahmad, N. And Alam, S. (2016) "Financial Development and Environmental Quality: The Way Forward", Energy Policy, 98: 353-364.

Sieminski, A. (2013) "International Energy Outlook 2013", US Energy Information Administration (EIA) Report Number: DOE/EIA-0484.

Sun, C., Zhang, F. and Xu, M. (2017) "Investigation of Pollution Haven Hypothesis for China: an ARDL Approach with Breakpoint Unit Root Tests", Journal of Cleaner Production, 161: 153-164.

Tamazian, A. and Rao, B. B. (2010) "Do Economic, Financial and Institutional Developments Matter for Environmental Degradation? Evidence from Transitional Economies", Energy Economics, 32(1): 137-145.

Tamazian, A., Chousa, J. P. and Vadlamannati, K. C. (2009) " Does Higher Economic and Financial Development Lead to Environmental Degradation: Evidence from BRIC Countries", Energy Policy, 37(1): 246-253.

Tang, J. (2015) "Testing the Pollution Haven Effect: Does the Type of FDI Matter?", Environmental and Resource Economics, 60(4): 549-578.

Wagner, U. J., & Timmins, C. D. (2009) "Agglomeration Effects in Foreign Direct Investment and the Pollution Haven Hypothesis", Environmental and Resource Economics, 43(2): 231-256.

World Bank. International Economics Dept. Development Data Group. (2018). World Development Indicators. World bank.

Yuxiang, K. and Chen, Z. (2011) "Financial Development and Environmental Performance: Evidence from China", Environment and Development Economics, 16(1): 93-111.

Zhang, Y. J. (2011) "The Impact of Financial Development on Carbon Emissions: An Empirical Analysis in China", Energy Policy, 39(4): 2197-2203..