



## **Linkages of Global Financial Crisis and Trade Direction in an Oil Based Economy**

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### **ABSTRACT**

This study examines the influence of the 2008 global financial crisis on trade flows between Kuwait and its main trading partners. Data sample covers the period from 1990 to 2012. In this study, estimates are tested using, fixed and random effects specifications, as well as Hausman test. Findings reveal that not all trading flows with Kuwait's trading partners got affected by the financial crises. Findings show that is the exports from Kuwait to China are affected Due to the financial crises. The expected negative influence of the global financial crisis is statistically significant in the case of Kuwait trade flows with China.

**Keywords:** Financial Crisis, Gravity Model, Panel Approach, Kuwait

**JEL Classifications:** F21, O53, C1

### **1. INTRODUCTION**

The economic growth and prosperity have been experienced by many economies around the world for several years (Lardy, 2013); however, the outcome of the global financial crisis changed many objectives (i.e., Helpman and Krugman, 1985; Helpman, Melitz, and Rubinstein, 2008; Hart and Tindall, 2009; Kose and Prasad, 2011). The crisis started mid of 2008 in the US market and grew until it expanded and covered several prominent economies around the world. The spillover effect of this crisis expanded to experience the 2011 European Union (EU) crisis or known as (Eurozone crisis) affecting the stability of the infrastructure of the financial markets of the member states. Greece, Spain followed by Italy, Ireland, and others were some of the member states whom were negatively affected by the crisis at the beginning, which led them later to experience instability and lack of confidence in their financial institutions. This resulted instability mainly due to the poor management of the actual financial infrastructures, and the absence of clarity and honesty of the transfer of financial information, especially in the case of Greece.

With the position owned by the Kuwaiti economy in an international level, its level of integration with other economies is certainly

exposed to any global shocks (Crystal,1989; Al-Shammari and Al-Salman, 2010). The Kuwaiti economy is integrated to a number of economies in both phases of exporting and importing. Those economies are known as its main trading partners. The Kuwaiti economy's major export commodities take the form of petroleum, petrochemical products, fertilizers and financial services; however, a wide range of products ranging from food products and textiles to machinery as import commodities. Accordingly, the relationship between Kuwait and its main trading partners is to be influenced by the global financial crisis due to the expansion taking place away from the source.

The study attempts to investigate the impact of the global financial crisis of the year 2008 on the trade flows between Kuwait and its main trading partners. Also, it analyzes the most influenced trade flow by the financial crisis, whether the export flows, import flows, or total trade flows. For the purpose of the study, annual panel data covering the period (1990-2012) of 112 countries is used. The study examines the impact of the financial crisis on Kuwait's trade flows using three different models, each taking the factors of exports, imports, and total trade into consideration separately. The estimations for all the three models involve pooled OLS estimation, fixed and random test specifications, after which a Hausman test is conducted.

The rest paper is constructed as follows. Section II contains an overview on the Kuwaiti economy and its trading partners. In Section III, the literature review is included. Section IV contains the methodology and model specification. Data description is provided in Section V. The empirical findings are explained in Section VI. The conclusion and policies implications are provided in Section VII.

## 2. OVERVIEW OF THE KUWAITI TRADING DIRECTIONS

The main challenge faced by the Kuwaiti economy is the lack of diversification in production away from oil production (Elimam, Girgis, and Kotob, 1997; Pfeifer, 2002). This can be seen mainly due to the positive fiscal situation and in part as a result of the poor relationship between the national assembly and the executive branch of the government. This has stymied most movement on economic reforms. This situation finds a path for improvement in the case of diversification as Kuwait pledges to spend up to \$130 billion over 5 years to diversify the economy away from oil; this in turn leads to attraction of more investments and boosts private sector participation in the economy (Figure 1 in Appendix A).

According to Kuwaiti trade, Kuwait's top exported products consists of petroleum oils and gases, crude, and other gaseous hydrocarbons. The majority of exports around 94.8% are composed of mineral fuels, lubricants and related materials. However, the major destinations for such exports are China, Saudi Arabia, and UAE. On the other hand, the cost, insurance, and freight import by origin states that in 2011 the import composition was 37.6% machinery and transport equipment, 18.8% manufactured goods, whereas 16% food, live animals, beverages, and tobacco. However, the top imported products were motor cars and other motor vehicles, transmission apparatus for radio-telephony, radio-broadcasting and medicaments. The major destinations for such imports, which are considered as top three partners for merchandise imports were China, the United States, and Japan.

A global financial crisis can be simply summarized as a weakness felt in the financial institutions of an economy that is caused by uncontrolled financial activities which have a negative impact on the overall market. This can be in the form of liquidity shortage, businesses failure, and bankruptcy of banks and financial institutions. The growth of such an incident until it cannot be controlled and leads to the collapse of the financial system is what is known as a crisis.

Accordingly, the study examines the recent global financial crisis that started at 2008 and took place in the US economy then branched out to other economies around the world which are strongly related via transactions with the source. It is seen as the worst experienced financial crisis after the great depression of 1930's. The crisis resulted in evictions, foreclosures and prolonged unemployment along with the total collapse of large financial institutions leading to the 2008-2012 global recession and contributing to the European sovereign-debt crisis.

An incident such as the global financial crisis leaves an impact that can lead to the damage of the corresponding economies. The damage varies according to the relationship between countries understudy and the sources of the crisis lead to financial collapse. The study covers a number of other trade relationships between Kuwait and other main trading partners. Some of those main partners are the EU and ASIAN bloc made up of China, Japan, India, and Korea. The study looks at the Kuwait and EU relationship. The Euro zone has been influenced by the global financial crisis through the experienced weakness of its financial institutions and banking system. Those were greatly affected from the crisis that started in the US economy and affected to cover a number of strong economies that are tied in a number of ways to the source. This happened due to the experience of the 'domino effect' theory, which is any some change, small in itself, will lead to similar nearby, leading to even more similar change, and so on, in a linear sequence, by analogy to a falling row of dominoes standing on end (Eisenhower, 1954).

The other trading partner understudy with Kuwait is the ASIAN bloc. According to Figure 2 in Appendix A, The pattern of trade between the two regions evolved with time and was shocked by several trade blockades that came into effect from a number of previous crises in the Asian markets (Pascha, 2009). For example, the Indian-Kuwaiti trade trends go far back to the times of the pearl diving era in the gulf. This slowed down and then nourished recently as the Indian market started to thrive again. However, the Japanese and Korean markets thrived with the development of the Asian markets and increased in their trade relationships with Kuwait. This thrive in the Asian markets is related to the US economy through a number of integrations, and so the incident of the global financial crisis had its impact on their markets. This can be seen clearly in the study as a negative influence is present between some of the trade flow relationships of KW-ASIAN.

## 3. LITERATURE REVIEW

The relationship between the global financial crisis and Kuwait's trade flows with its major trading partners is an aspect that is measured by looking into the impact of one on the other. The literature review summarizes the global financial crisis, its possible reasons, and expected consequences.

Host of literature that would help to confirm the ability in using the gravity model to measure the impact of the crisis on trade flows is broken down into a number of categories. The first category investigates trade and its determinants with a preview on the main commodity of trade for Kuwait, which is oil, followed by the GCC trading impacts as a region (i.e., Al-Shammari and Al-Salman, 2010; Boughanmi, 2008; Insel, and Tekce, 2011). Later, studies cover the impact of the global financial crisis on both trade and its determinants. Finally, an overview of different studies about the gravity model is presented. Before undertaking the activity of trade between any two parties in the form of groups, individuals or countries, the terms of trade for any two products between any two parties might be affected by a wide variety of factors that has to be first understood. This is then followed by the recognition that

many of the determinants correspond to well-known concerns in business and ethics have to be reached, in order, for the process to be presented and completed successfully. ( Egger and Larch, 2012).

A study by Kimura and Lee (2006) examines the impact of different factors on bilateral service trade, relative to that of bilateral goods trade. The data covers ten countries of the Organization for Economic Cooperation and Development (OECD) and other economies (both member and non-member) for years (1999-2000) and is estimated using standard gravity model. The findings show that service trade is better predicted by the gravity equation than goods trade and that there is a complementary relationship between goods exports and service imports. Schumacher and Siliverstovs (2006) show how the home-market effects can be estimated using Bergstrand generalized gravity equation. The empirical results present significant home-market effects for differentiated goods in many manufacturing industries which are either capital or labor intensive. On the other hand, the paper's results shows that home-market effects can only be detected for data disaggregated.

A study by Felbermayr and Kohler (2006) finds that WTO membership enhances trade. Their study investigates the intensive and extensive margin to world trade through the proposition of a "corner-solutions version" of the gravity model to explain movements on both margins. The findings show that a Tobit estimation of this model resolves the so-called "distance puzzle".

The paper by Huot and Kakinaka (2007) studies the bilateral trade flows using the gravity equation with data covering the period (2000-2004) taking into account the establishment of the ASEAN free trade area (AFTA). The measure of trade structure is constructed by the degree of trade complementarity between Cambodia and its trading partners. The findings show that a higher degree of trade complementarity is associated with a higher level of trade flows.

A study by Ekanayake and Mukherjee (2010) analyzes the trade creation and trade diversion effects of the regional trade agreements (RTA) in Asia and their effects on intra-regional trade flows. The data used is annual for the period (1980-2009) using the gravity model to measure trade creation and diversion effects on trade flows within and across member groups. The findings are similar to other studies on Asian trade flows. This is as coefficients of real gross domestic product (GDP), population and distance have expected signs and magnitudes in all estimated models.

Trading is an activity like any other; it affects outcomes of an economy and gets affected by a number of different factors known as the determinants of trade. Those factors come in a variety of forms and are mostly identified as the exchange rate, political circumstances or issues, and trade barriers. According to Salim et al. (2011), the establishment of the GCC has a significant impact on trade; however, there is some space for potential activities have begun by the members under the category of trade between the members within the bloc. This shows the importance of Kuwait as a country and location for trade and the possibility that arises for improvement of the level of activity with its neighboring countries. The study uses the gravity model for panel data for main trading

partners having potential of increased and improved trade between the members themselves. Size and distance are considered as main factors playing an important role in the model used in the study, but they also influenced the results achieved. This shows that Kuwait has the ability to cover more successful trading within its area and territory.

On the other hand, Aisen and Veiga (2008) reveal that high political instability leads to volatile inflation rates. Political instability also has bigger effects on inflation volatility in developing countries with lower degrees of central bank independence and economic freedom. This would lead to an increase in the value of products and items produced and so would cause them to become less attractive and affect the level of trade between economies if exist.

Sablowski (2012) looks at how the world's financial crisis has its powers penetrating the European markets. They are mainly poor resistant due to the uneven development and unequal distribution of capital accumulation in the zone itself along with the contradictions of integration.

A study by Al et al. (2006) investigates at the co-movement of commodity prices using the excess-co-movement hypothesis. That is when the prices of commodities move together beyond what can be explained by fundamentals. It is found that most of co-movements are among commodities with high price correlation and all co-movements with those with marginal price correlation. Common movements in supply factors are found as a factor playing a dominant role in the observed co-movements in commodity prices. This relationship can have its effects on the direction and size of trade along with other factors between the two countries in the relationship. According to the study, it would influence the trade either as export or import between Kuwait and any of the countries of the world during the phase of the euro financial crisis. That is because a number of factors combined can play the role and affect the activity of trade.

Another important factor that has a great impact on trade is the exchange rate and its volatility. Mickenzie (1999) finds the impact to have an ambiguous effect. On the other hand, Pozo (1992) looks at the effect of the exchange rate volatility on trade in the beginning of the previous century using the rolling standard deviation and generalized autoregressive conditional heteroskedasticity process to measure the exchange rate volatility. The findings show that the volume of British exports to the US decreased with an increase in volatility by any measure. Qian and Varangis (1994) investigate the influence of exchange rate volatility on trade using ARCH-in-mean model and finds out that the impact is positive in the case of Sweden, the UK, and Netherlands.

However, Al-Mutairi and Hoque (2001) set up a study examining the short and long term behavior of balance of trade and its various determinants for Kuwait and its main trading partners through the period (1973-1998). The use Johansen's multivariate co-integration technique for long-run and error correction model for short-run. The findings show that the devaluation, in both nominal and real exchange rates of Kuwait, tend to have a positive impact on the trade balance. On the other hand, Hondroyiamis

et al. (2008) show that there is little evidence that volatility has a negative and significant impact on trade especially, if commodity is of great importance such as oil and energy resources. Eaton and Kortum (2002) develop a Ricardian trade model incorporating realistic geographic features into general equilibrium and using data on bilateral trade in manufactures, prices and geography from 19 OECD countries in 1990. The equation is set to deliver simple equations of bilateral trade with parameters relating to absolute advantage, comparative advantage (promoting trade) and geographic barriers (resisting it). This helps the model to find gains of trade and effects of tariff reduction along with the role of trade in spreading benefits of new technology.

The other extent would be free trade. Kowalczyk and Riezman (2009) look at free trade areas and their implications of higher world economic welfare equal to the sum of all nations' volume of trade or efficiency effects through the use of a simple computable general equilibrium model of a world economy where competition is perfect. Konishi et al. (2003) show that if custom unions do not affect trade with non-member countries, global free could be achieved immediately if free trade were introduced together with international side payments equal to the terms of trade effects. Vicard (2009) studies whether the form or depth of RTA would have impact on trade. The study uses the gravity model with panel data for the period (1960-2000). The findings show that creating any kind of RTA's providing trade preferences to their member countries significantly increases bilateral trade. However, their effect on bilateral trade does not significantly differ according to the depth of agreements.

#### 4. METHODOLOGY AND ECONOMETRIC MODEL

The estimation commences with the analysis of statistical features of the panel data. The use of panel data entails the application of fixed and random effects test followed by the Hausman test. The random effects assumption is that individual specific effects are uncorrelated with the independent variables and vice versa for the fixed effects assumption. To decide between the two, a Hausman test is then used. A panel unit root test is conducted to identify whether the variables are stationary at level or after differencing and are carried out directly after the statistical analysis of the data (Im, Pesaran, and Shin, 2003; Hadri, 2000; and Harris, 1999). Panel unit root tests, described below, will be applied on each variable in the model.

The impact of the world financial crisis of 2008 on trade flows between Kuwait and its main trade partners is investigated using gravity model which is estimated by panel data with fixed and random effects technique. The regression is used over three times covering the three phases of trade as dependent variables: Exports, imports, and total trade. The variables involved take into account two directions of trade: One for exports from Kuwait to its main trading partners; the other for imports from its main trading partners to Kuwait. Below is the basic gravity model with variables used from previous built gravity models ( Deardorff, 1998; Lewer and Berg, 2008; Linder, 1961; and McCallum, 1995, Shepotylo, 2010; Smarzynska, 2001; and Tinbergen, 1962):

$$\ln(X)_{ij} = \beta_0 + \beta_1 \ln(\text{GDP}_i, \text{GDP}_j) + \beta_2 \ln(\text{Distance})_{ij} + \beta_3 (\text{Border})_{ij} + \beta_4 \ln(\text{Inflation})_{ij} + \epsilon_{ij} \quad (1)$$

Where total exports flows "X<sub>ij</sub>" from country i to country j is measured in current US dollars and then deflated by the US CPI; "GDP" denotes the GDP of country i and j combined in current terms, "Distance" is the distance between country i and country j, "Border" stands for bordering countries either by land or sea and takes the form of 1 if yes and 0 if no, "Inflation" stands for inflation consumer price combined for both country i and j, and  $\epsilon_{ij}$  is an error term. However, since the study is covering the influence of the world financial crisis, this model is expanded to cover a large variety of variables that could capture such an influence. The estimated model is extended by the inclusion of more variables to capture the impact of the global financial crisis on Kuwait and its main trading partners. The following is the extended gravity model which follows closely the work of Anderson, and van Wincoop (2003), Anderson and van Wincoop (2008), and Al-Shammari and Al-Salman (2010):

$$\ln(X)_{ij} = \beta_0 + \beta_1 \ln(\text{GDP}_i, \text{GDP}_j) + \beta_2 \ln(\text{Distance})_{ij} + \beta_3 (\text{Border})_{ij} + \beta_4 \ln(\text{Inflation})_{ij} + \beta_5 (\text{Oil})_{ij} + \beta_6 (\text{Institutional Stability})_{ij} + \beta_7 (\text{Language})_{ij} + \beta_8 (\text{FTA})_{ij} + \beta_9 (\text{EU})_{ij} + \beta_{10} (\text{GCC})_{ij} + \beta_{11} (\text{Asian})_{ij} + \beta_{12} (\lambda_i) + \beta_{13} (\pi_j) + \epsilon_{ij} \quad (2)$$

Where "Oil" is the level of oil prices; "Institutional Stability" is used to measure the level of governance in a country's with an estimate of -2.5 for weak and 2.5 for strong; "Language" stands for a binary variable for language; "FTA" stands for free trade agreements between Kuwait and other candidates taking the form of 1 if agreement between them and 0 if no agreement exists; "EU" is whether the country is part of the European union, taking the form of 1 if part of the EU and 0 if not part of EU; "GCC" is a dummy variable that takes the form, whether the country i or j is part of the GCC bloc; "Asian" stands for a bloc of four Asian countries created by the study including China, Japan, Korea, and India and take the form of 1 if part of bloc and 0 if not part of bloc; and  $\epsilon_{ij}$  is an error term. The variables above are in log forms except for the dummies.

Those additional variables are chosen based on the study interest. Institutional stability looks at the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means through the strength of its rules and regulations and the manner at which they are controlled. This can be related to the crisis by two ways. First, it could lead to the unrest of the financial institutions, and secondly, the financial unrest could lead to the lack of stability so its measure is of importance on the size of influence. On the other hand, oil prices, FTA and economic blocs such as EU and GCC are important factors of an economy and interfere in its transactions so would have a direct or indirect impact on the influence of such a crisis. This study is not only looking for any negative influence existing or not, but also it is trying to find out which relationships of trade are influenced and if so do they meet expectations and the size of such an influence. This could be seen through the negative values which mean that influence is present; however, the size of value representing significance is of the most importance, which signals if this negative noise is seen or not.

## 5. DATA DESCRIPTION

The data covers Kuwait and its main trading partners throughout the period from 1990 to 2012. The data sample covers 112 countries. It includes annual exports and imports data that are in the form of bilateral trade among Kuwait and its main trading partners. Those values are measured as annual averages in millions of US dollars. Trade data extracted from the International Monetary Fund (IMF) database (direction of trade statistics) CD-Rom. The data is collected for the variable of GDP in current US dollars in units of billions. This is obtained using the World Bank's world development indicators.

The source of data originates from the IMF, OECD, and World Bank. The oil prices are taken as an average using the BRENT form of benchmark pricing. The great-circle distance is also known as orthodromic and is considered as the shortest distance between two points on the surface of a sphere, measured along the surface of the sphere.

## 6. EMPIRICAL RESULTS

The model has been estimated using three different tests and techniques known as pooled OLS, fixed-effects and random-effects, and they all follow the same outline of regression, division of tables and variables used. The summary statistics are shown in Appendix B - Table 1. The estimated model is examined using Pooled OLS in Appendix B - Tables 2-4. Findings for most of the traditional gravity estimates are significant, except for border variable. More interestingly, the coefficient of the trading relationship between Kuwait and China is greatly affected by the incident of the world financial crisis. Results of the pooled OLS regression show that the financial crisis affects negatively the trade relationship between China-Kuwait across all its three forms of trade; exports, imports, and total trade and show statistically significant results.

On the other hand, the trade relationship between Kuwait and the GCC is positively affected due to the financial crisis. The estimated coefficient for GCC dummy is statistically significant to affect the exports of Kuwait to GCC countries with 5% significance level, whereas estimated coefficient for GCC dummy is statistically significant to affect the total between Kuwait and GCC countries with 10% significance level. Interestingly, findings show that trade between Kuwait and its partners of EU, Germany and the Asian blocs are statistically not significant. This suggest that the global financial crisis does not have an impact on the trade relationship between these partners and Kuwait.

Appendix B in Tables 5-7 show results of the benchmark model using fixed effects procedure. Findings of these tables confirm results obtained in the benchmark model using Pooled OLS in Appendix B - Tables 2-4. According to the results for fixed effects regressions using country specific fixed effects, namely column 1 in Appendix B - Table 5, most of the coefficients of traditional gravity variables are significant and show the expected sign. Findings show that the GDP leads to increase overall bilateral trade between two countries. The coefficient of the GDP is statistically

significant across all seven columns, suggesting that a one percent increase in the country's GDP increases their bilateral export by about 105%.

According to fixed effects results, a negative impact of the financial crisis is present only for the case of China under the exports at significance level of 10%. The fixed effects results for imports of Kuwait from China and total trade between these countries statistically insignificant. On the other hand, the GCC has all positive readings for all three forms of exports, imports, and total trade but all are insignificant. The other readings for the EU, GCC, Germany, and ASIAN are all insignificant and showing a positive sign except for the EU in the phase of exports which shows a negative sign.

The model is also estimated using the random effect procedure. Although results are not shown due to space limit, findings confirm the results obtained in both the Pooled OLS and fixed effect with some small exceptions. Accordingly, the Hausman test shows that the p-values are (0.0818) for exports, (0.0000) for imports and (0.0000) for total trade. This shows that the model for exports reveals a result greater than 0.05; therefore, for this case we accept the null hypothesis that there is no substantial difference between estimators of the fixed and random effects models. However, for the other two models of imports and total trade the null hypothesis is rejected leading to the acceptance of the fixed effect model and suggesting that the difference of coefficients from the fixed effect and random effect estimation is systematic. This reveals that the random effect estimation is only consistent and efficient for the exports model (Table 8).

## 7. CONCLUSION

This study investigates the influences and effects of the global financial crisis on the trade relationship between Kuwait and its main trading partners based on three models of exports, imports, and total trade. The theoretical framework of influencing variables used in this study helps examining the role of the global financial crisis on the direction of trade between Kuwait and its main trading partners. Kuwait's main trading partners are characterized in a number of countries like China and Germany, and economic blocs such as the EU, GCC and ASIAN.

Those variables with an influence on the model take the form of combined GDP, combined inflation, oil price, language, border, and political stability. Estimates of the model are tested using yearly data over the period (1990-2012). The regression of the models covers the tests of pooled OLS, fixed and random effects, and the Hausman test. The findings reveal that a negative statistically significant relationship is present between Kuwait and China; however, a positive statistically significant relationship exists between Kuwait and the GCC bloc. The Kuwait-China relationship is influenced in all three forms of trade: Exports, imports, and total trade. The Kuwait-China relationship is mainly affected due to its strong integration to the US economy, which is the source of the crisis.

The Chinese-Kuwaiti trade relationship is negatively affected by the global financial crisis mainly due to the size and importance

of the interaction of the Chinese economy with the US economy which is the source of the global financial crisis. The backfire that landed in the Chinese economy from the crisis affected the credibility of its institutions and output levels. On the other hand, the crisis left an effect on oil prices taking the direction of an increase, and so negatively affected the producing economies. Kuwait as an economy is influenced by two different perspectives. One as an oil producing economy, and the other is the strong financial interaction with the US economy. This criterion fits with the findings of the study that states the trade relationships between Kuwait and China is affected by all its three flows.

However, the other affected party from the global financial crisis is the economic bloc of the GCC. The empirical results show a statistically significant positive effect. This is mainly due to the strength of the bloc as a whole and so show an increase in trade between them and the state of Kuwait during the global financial crisis. One of the main reasons could be due to the commodity of trade, which is oil. Its importance is major to the big and wealthy economies. This shows that distance is not considered an issue during this activity of trade. Another factor is also that the commodity of oil is experiencing an inelastic demand, which means that the demand does not go through big changes while changes in price of oil or income levels of importing countries is experienced. This all strengthens the foundation of the bloc and leads to the success of a number of regulations such as the custom union and free trade areas along with the variety of FTAs signed. Those agreements allow the stability in the flow of trade regardless of the influences from different circumstances such as the global financial crisis.

## 8. POLICY IMPLICATIONS

Looking at the case of Kuwait and the size of the influence on its economy and trade relationships from the global financial crisis, there are some policy implications that can be extracted. The presence of negative influence means that the Kuwaiti economy has to diversify itself and enter other fields of production such as food, clothing, and construction materials. There has to then be trials of gaining at least comparative advantage in the production of a single product as a forward step and which would be considered of importance in the international markets. This is a lesson that the Kuwaiti economy has to learn to build a path that leads to self-sufficiency, which later could lead it to be less influenced and vulnerable from different negative external shocks.

The impact of the financial crisis can be mitigated by developing fixed trade contracts signed between Kuwait and its trading partners. A good example could be the signing of long-term manufacturing or agricultural contracts with fixed trade fares on certain necessary products. This will help to minimize the size of negative influence an incident such as the financial crisis can cause by eliminating the transmission of the impact from any economic shocks in the different economies trading with Kuwait.

Since the state of Kuwait have a variety of trading relationships with a number of trading partners, it should take into account renewing those trade relationships by looking into new markets

and capturing the potential of building new and more stable trade paths between new partners. Those opportunities could mean the addition of new products that would fit the ever-changing needs of the economy and help lessen the risks of the crisis or any financial difficulties that might take place. This diversification can also mean that dependency rates on other economy outputs are shared, which can lead to more stability and strength of the financial infrastructure. This action of diversification can be made possible every 5 years with the renewal of the government's development plan to exclude any unwanted changes or sudden shocks affecting the overall economic stability.

The findings show that blocs such as the GCC, which are small in size but big in wealth and power, have been less affected within themselves. This can be due to different agreements signed between them that can ease trade. This will lead us to seriously thinking of improving the bloc. Mainly, due to the results revealed by the study that its ability to overcome the global financial crisis and the very slight impact that has been experienced with no major negative influence. One of the most important steps that have to be taken into consideration is achieving the establishment of the monetary union and custom union as this will help increase the efficiency of the common market within the bloc and so will be a great step towards increasing bilateral trade. This will ease the financial transactions between the bloc and different economies and give the economy strength and support and less damage in cases of collapse that could influence their stability through the "domino effect" theory. This is when a certain economy collapse and the other is influenced and gets affected by the integration between the transactions of both. Once the bloc is self-sufficient, the less is the need for integrations and so less collapses through the "domino effect" theory. It will be more of a supporting system than a following one for the other economies and most importantly the economies of the bloc members.

Finally, the main instruments that maneuver any economy have to be reviewed and adjusted. One of those instruments is the monetary policy, which plays a vital role in the outcomes of any economy. It is usually constructed with two features, the inflation and policy rate. However, after the presence of the crisis, it is believed that new instruments have to be added to the monetary policy of any economy. This can help to absorb any shocks and fit easily in the overall output of the economy. Those instruments can take the form of flexible inflation targeting, separation of the supervisory and macroeconomic aspects of the monetary policy. This will strengthen the capabilities of the economy and motivate the stability of its institutions and their outcomes affecting its trading relationships.

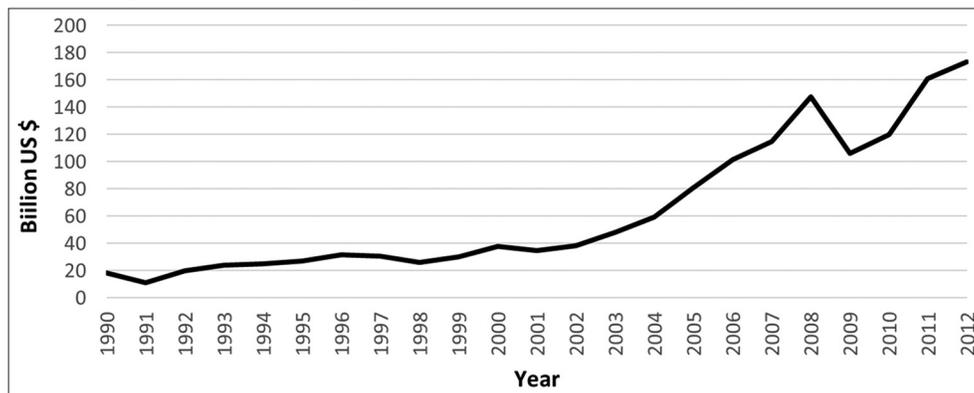
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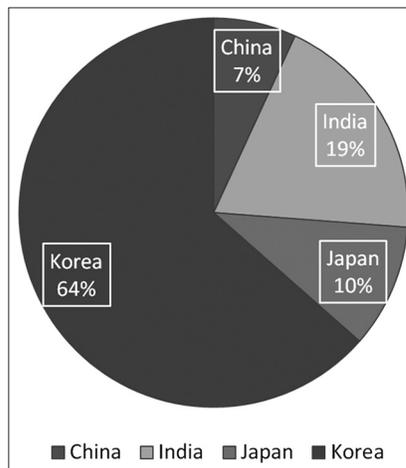
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## APPENDIX (A)

**Figure 1:** Gross domestic product Levels for the Kuwaiti Economy for 1990-2012



**Figure 2:** Trade between Kuwait and Members of ASIAN Bloc (1995-2012)



## APPENDIX (B)

**Table 1: Summary statistics**

Variable	Observation	Mean±SD	Min	Max
Year	2513	2001.2±6.568185	1990	2012
FTA	2513	0.1002786±0.3004308	0	1
Institutional stability	1416	-0.0787359±0.9992027	-3.32	1.67
Border	2513	0.0274572±0.163444	0	1
Language	2513	0.1368882±0.3437977	0	1
GDP	2512	49.22726±2.29422	42.212	56.26267
Exports	1835	1.639227±3.620726	-4.60517	9.719193
Imports	1342	2.068575±3.120806	-4.60517	7.759149
Total trade	1524	2.274288±3.440525	-4.60517	9.818822
Oil price	1791	3.491137±0.7038314	2.282382	4.697202
Distance	1768	8.511104±0.7778024	6.035481	9.607841
Inflation	1549	1.387419±2.52349	-9.365341	20.35934

GDP: Gross domestic product

**Table 2: Pooled OLS results-exports**

Dependent variable: Log exports	(1)	(2)	(3)	(4)
Log GDP	1.030968 (19.71)***	1.033081 (19.55)***	1.033444 (19.60)***	1.032128 (19.52)***
Log oil price	-0.4229659 (-2.18)*	-0.4110891 (-2.04)*	-0.5172481 (-2.64)**	-0.4498771 (-2.28)**
Log distance	0.3967381 (2.58)**	0.343064** (2.18)*	0.4132667 (2.65)**	0.3822432 (2.46)**
Inflation	-0.0093311 (-0.16)	-0.0147792 (-0.25)	-0.0080996 (-0.14)	-0.0052432 (-0.09)
Language	1.832189 (5.24)***	1.896115 (5.37)***	1.914853 (5.43)***	1.89432 (5.36)***
Border	0.8860683 (1.26)	0.987621 (1.39)	0.8397408 (1.17)	0.9422483 (1.32)
Institutional stability	0.3943797 (3.58)***	0.4654011 (4.11)***	0.419248 (3.79)***	0.4138056 (3.70)***
FTA	3.486894 (10.10)***	3.149095 (9.16)***	3.050268 (8.77)***	3.362559 (9.12)***
China	-6.658466 (-4.88)***			
EU		-0.8621572 (-1.49)		
GCC			2.730394 (2.25)**	
Asian				-1.063285 (-1.15)
Adjusted R <sup>2</sup>	0.458	0.447	0.447	0.44

The table reports t-statistic in parentheses, \*significant at 10%, \*\*significant at 5%, \*\*\*significant at 1%. Robust standard errors (white test). GDP: Gross domestic product

**Table 3: Pooled OLS results-imports**

Dependent variable: Log imports	(1)	(2)	(3)	(4)	(5)
Log GDP	1.432299 (40.62)***	1.432152 (40.37)***	1.432757 (40.38)***	1.432235 (40.39)***	1.43279 (40.37)***
Log oil price	-1.368358 (-11.18)***	-1.386759 (-11.36)***	-1.400091 (-10.96)***	-1.394043 (-11.37)***	-1.396388 (-11.27)***
Log distance	0.2324051 (2.40)**	0.2200815 (2.30)**	0.2294785 (2.23)**	0.2233552 (2.34)**	0.2243523 (2.29)**
Inflation	-0.0865635 (-2.53)**	-0.0841358 (-2.44)**	-0.0847099 (-2.44)**	-0.0842599 (-2.45)**	-0.0836452 (-2.43)**
Language	2.12814 (8.93)***	2.158778 (9.02)***	2.155817 (9.01)***	2.160814 (9.02)***	2.156471 (9.01)***
Border	1.542091 (3.45)***	1.602993 (3.57)***	1.596744 (3.55)***	1.566715 (3.46)***	1.601912 (3.55)***
Institutional stability	0.4166194 (6.46)***	0.4283493 (6.61)***	0.433196 (6.55)***	0.4281473 (6.61)***	0.4299719 (6.60)***
FTA	0.686261 (3.19)***	0.5653236 (2.67)**	0.5583587 (2.62)**	0.5375647 (2.49)**	0.5628604 (2.48)**
China	-3.124349 (-2.98)**				
Germany		0.4068153 (0.39)			
EU			-0.0820276 (-0.23)		
GCC				0.4846322 (0.62)	
Asian					0.0032923 (0.01)
Adjusted R <sup>2</sup>	0.706	0.703	0.702	0.703	0.702

The table reports t-statistic in parentheses, \*significant at 10%, \*\*significant at 5%, \*\*\* significant at 1%. Robust standard errors (white test). GDP: Gross domestic product

**Table 4: Pooled OLS results-total trade**

Dependent variable: Log total trade	(1)	(2)	(3)	(4)	(5)
Log GDP	1.341203 (38.31)***	1.339999 (37.91)***	1.34087 (37.95)***	1.342268 (38.07)***	1.340948 (37.94)***
Log oil price	-0.9180985 (-7.25)***	-0.9484149 (-7.43)***	-0.9300256 (-7.11)***	-0.9730937 (-7.63)***	-0.9450679 (-7.36)***
Log distance	0.3490353 (3.54)***	0.336853 (3.38)***	0.3282233 (3.27)***	0.3580799 (3.59)***	0.3393915 (3.41)***
Inflation	-0.0911802 (-2.60)**	-0.0865702 (-2.45)**	-0.0903275 (-2.54)**	-0.0892431 (-2.53)**	-0.0878 63 (-2.48)**
Language	1.697856 (6.88)***	1.734199 (6.97)***	1.73565 (6.98)***	1.750399 (7.05)***	1.737544 (6.99)***
Border	2.831326 (5.84)***	2.923728 (5.98)***	2.911237 (5.95)***	2.789 207 (5.67)***	2.903376 (5.90)***
Institutional stability	0.5689014 (8.2)***	0.5904578 (8.44)***	0.5988836 (8.39)***	0.5818269 (8.34)***	0.5845275 (8.32)***
FTA	1.892718 (7.99)***	1.706747 (7.27)***	1.69314 (7.19)***	1.614094 (6.77)***	1.749137 (6.96)***
China	-4.669588 (-4.03)***				
Germany		-0.6742229 (-0.59)			
EU			-0.2794086 (-0.74)		
GCC				1.797083 (2.09)*	
Asian					-0.284124 (-0.44)
Adjusted R <sup>2</sup>	0.686	0.680	0.680	0.682	0.680

The table reports t-statistic in parentheses, \*significant at 10%, \*\*significant at 5%, \*\*\*significant at 1%. Robust standard errors (white test). GDP: Gross domestic product

**Table 5: Fixed effect results-exports**

Dependent variable: Log exports	(1)	(2)	(3)	(4)
Log GDP	0.7193826 (6.12)***	0.7407277 (6.26)***	0.719604 (6.10)***	0.7125213 (6.03)***
Log oil price	0.0737809 (0.45)	0.1121368 (0.69)	0.0868293 (0.53)	0.0808481 (0.50)
Inflation	-0.0299523 (-0.87)	-0.0404345 (-1.16)	-0.0302926 (-0.88)	-0.0288414 (-0.84)
Institutional stability	0.0665655 (0.40)	0.0641116 (0.39)	0.0607945 (0.36)	0.0865849 (0.51)
China	-2.127306 (-2.12)*			
EU		-0.6141545 (1.81)		
GCC			0.00136 (0.00)	
Asian				0.5006429 (1.01)
Adjusted R <sup>2</sup>	0.3108	0.3233	0.3194	0.3240

The table reports t-statistic in parentheses, \*significant at 10%, \*\*significant at 5%, \*\*\*significant at 1%. Robust standard errors (white test). GDP: Gross domestic product

**Table 6: Fixed effect results-imports**

Dependent variable: Log Imports	(1)	(2)	(3)	(4)	(5)
Log GDP	0.6242383 (9.91)***	0.6204791 (9.87)***	0.6207552 (9.86)***	0.6236719 (9.91)***	0.6188698 (9.82)***
Log oil price	-0.3875313 (-4.20)***	-0.3889661 (-4.22)***	-0.4006321 (-4.31)***	-3886816 (-4.21)***	0.3904959 (-4.23)***
Inflation	-0.381636 (-2.23)*	-0.380305 (-2.23)*	-0.0353382 (-2.05)*	-0.0382031 (-2.24)*	-0.0371157 (-2.17)*
Institutional stability	-0.0390701 (-0.43)	-0.0364856 (-0.40)	-0.0390923 (-0.43)	-0.0371568 (-0.40)	-0.0219895 (-0.24)
China	-0.390701 (-0.06)				
Germany		0.8771742 (1.66)			
EU			0.1984529 (1.12)		
GCC				0.1329717 (0.35)	
Asian					0.3342247 (1.19)
Adjusted R <sup>2</sup>	0.6246	0.6241	0.6240	0.6253	0.6285

The table reports t-statistic in parentheses, \*significant at 10%, \*\*significant at 5%, \*\*\*significant at 1%. Robust standard errors (white test). GDP: Gross domestic product

**Table 7: Fixed effect results-total trade**

Dependent variable: Log total trade	(1)	(2)	(3)	(4)	(5)
Log GDP	0.662476 (9.92)***	0.660672 (9.90)***	0.6613094 (9.90)***	0.6620921 (9.92)***	0.66196729 (9.89)***
Log oil price	-0.1691016 (-1.73)	-0.1701304 (-1.75)	-0.1743073 (-1.78)	-0.1710606 (-1.75)	-0.1694663 (-1.74)
Inflation	-0.03245 (-1.75)	-0.0324366 (-1.75)	-0.0314773 (-1.69)	-0.0326424 (-1.76)	-0.0323593 (-1.75)
Institutional stability	-0.0347862 (-0.35)	-0.334859 (-0.34)	-0.0346196 (-0.35)	-0.031998 (-0.32)	-0.0326193 (-0.32)
China	0.0477558 (0.08)				
Germany		0.5965928 (0.98)			
EU			0.0886333 (0.44)		
GCC				0.254237 (0.59)	
Asian					0.0530291 (0.17)
Adjusted R <sup>2</sup>	0.5663	0.5658	0.5663	0.5691	0.5672

The table reports t-statistic in parentheses, \*significant at 10%, \*\*significant at 5%, \*\*\*significant at 1%. Robust standard errors (white test). GDP: Gross domestic product

**Table 8: Hausman test results**

Dependent variable in natural log	Exports difference between RE and FE	Imports difference between RE and FE	Total trade difference between RE and FE
Log GDP	-0.1427751	-0.2393533	-0.2131442
Log oil price	0.1346014	0.2403325	0.2098163
Inflation	0.0206733	0.0227583	0.0236935
Institutional stability	-0.111468	-0.0820057	-0.1166991
FC	0.0483001	0.0865918	0.072615
$\chi^2$ (5)	9.78	64.44	48.80
$P > \chi^2$	0.0818	0.0000	0.0000

GDP: Gross domestic product