Factors Influencing Export in Bilateral Trade: An Empirical Investigation in the Middle-East Context

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The purpose of this paper is to examine factors influencing export in bilateral trade in the Middle-East context. The study considers the bilateral trade flows across three Gulf Cooperation Council countries—the Kingdom of Saudi Arabia (KSA), Bahrain (BAH) and Qatar (QAT)—over the last 30 years (1981-2010). The study focuses on the relationships between BAH and QAT, combined as one group, and KSA, which has a relatively larger economic mass and population. Data related to bilateral trade was collected from the International Monetary Fund (IMF). The proposed model was tested using the Structural Equation Modeling (SEM) technique. Our results indicated that GDP, POP_GR, and GDP/CA have a positive relationship with the level of KSA_EX, while the DIST related negatively to the level of KSA_EX. The study shows that all factors are crucial to the success of bilateral trade flow between both parties (BAH and QAT) and KSA because they provide the facts that decision makers need to make the appropriate decisions. Lastly, the article discusses research contributions and limitations of the study that could be addressed in future research scope.

Keywords: Bilateral trade, economic integration, structural equation modeling, Gulf Cooperation Council, regional integration

JEL: F14, F15

The Gulf Cooperation Council was established 30 years ago in 1981; it encompasses the Kingdom of Saudi Arabia (KSA), United Arab Emirates (UAE), State of Kuwait, State of Qatar (QAT), Kingdom of Bahrain (BAH), and Sultanate of Oman. The main purpose the Gulf Cooperation Council was to create an economic block (Rizvi, 1982). In 2003, the Gulf Cooperation Council was able to establish a custom union, one of the intended milestones behind its inception (Secretariat General, 2004). On the other hand, other aspects of integration, such as the creation of a monetary union, were delayed due to the

failure to form a free trade zone (Persson, 2001). The Gulf Cooperation Council economic block was able to attract foreign direct investments (FDI) and increase trade (Yeyati, Stein and Daude, 2003), specifically between the periods of 2000 – 2005, where all Gulf Cooperation Council members showed no vulnerability in exchange rates (Blomstrom and Kokko, 1997) (see Table 1). Furthermore, Bahrain and Oman are the most integrated countries within the Gulf Cooperation Council region (see Table 2).

The annual exports of the region are around $155 billion; 83% of this is in oil. For the Gulf Cooperation Council to reach its potential as a trading block competing in the globalizing world economy there is a need to implement policy

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Country	2000 ExRᵃ	2000 IR (%)ᵇ	2001 ExRᵃ	2001 IR (%)ᵇ	2002 ExRᵃ	2002 IR (%)ᵇ	2003 ExRᵃ	2003 IR (%)ᵇ	2004 ExRᵃ	2004 IR (%)ᵇ	2005 ExRᵃ	2005 IR (%)ᵇ
UAE	4.71	4.5	4.56	4.5	4.84	2.8	5.32	3.2	5.64	3.2	5.22	10.5
Kuwait	0.39	1.5	0.38	2.5	0.39	2.0	0.42	1.2	0.45	2.3	0.41	4.1
QAT	4.67	2.5	4.61	2.0	4.80	1.9	5.28	2.0	5.59	3.0	5.18	8.8
BAH	0.48	2.0	0.47	1.5	0.49	0.5	0.54	0.4	0.57	2.1	0.53	2.7
KSA	4.80	0.98	4.75	1.9	4.94	1.0	5.44	1.0	5.76	0.8	5.33	0.4
Oman	0.49	0.8	0.48	1.0	0.5	-0.5	0.55	0.3	0.57	0.2	0.54	1.2

Note: Exchange rate is calculated by currency unit per Special Drawing Rights (SDR; 1SDR=1.46USD). This rate, not used in fund transaction, is a reciprocal of SDR per currency. (ExR = Exchange Rate, IR = Inflation Rate)
Source: Exchange rate archives, IMF 2006a, World Fact Book, 2001-2006b

Table 1. FDI and increase trade, specifically between the periods of 2000 – 2005

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
BAH	48.40	43.60	43.70	36.30	33.20	35.40	38.40	37.90	12.60	10.60
Kuwait	0.70	0.10	0.40	2.50	3.10	3.70	3.40	3.30	3.90	3.00
Oman	28.40	8.80	10.00	15.20	14.70	14.00	13.10	14.70	17.90	16.10
QAT	4.30	4.80	5.10	6.60	6.50	6.40	6.30	5.10	5.70	5.00
KSA	3.20	3.10	2.90	2.90	2.90	3.40	3.70	3.70	3.40	3.10
UAE	4.50	4.50	5.90	6.40	6.50	6.30	5.80	5.90	7.00	7.90

Sources: Compiled from IMF publications.

Table 2. Intra- Gulf Cooperation Council Trade-Integration (Trade Integration Ratios)

reforms to enhance non−oil growth and create employment opportunities for a rapidly increasing labor force, in addition to reducing vulnerability to oil price shocks (Baxter and Kouparitsas, 2006).

As a block, the Gulf Cooperation Council has about 45% of the world's proven oil reserves and 25% of crude oil exports, and the Gulf Cooperation Council holds at least 17% of the proven global natural gas reserves. KSA alone accounts for about 47% of the total of the region's exports and 37% of the region's imports, which makes it a vital driving force in the Gulf Cooperation Council (IMF Publications, 2002) (see Table 3). As many Gulf Cooperation Council members are major oil exporters, most trade is conducted with non−Gulf Cooperation Council countries, primarily Japan, the European Union (EU) and the United States (US).

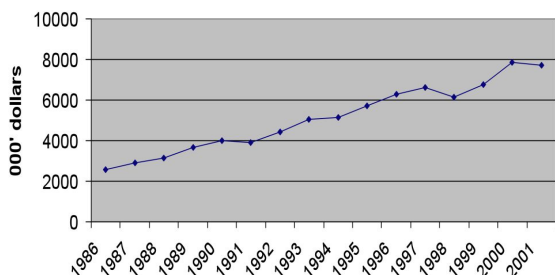| Country	Nominal GDP ($ millions)	Population (Millions)	Government Gross Debt (% of GDP)	Nominal GDP Per Capita ($)	Oil and Gas Exports (% of Total Exports)	Oil Revenues (% of total Revenues)
KSA	188,960	22.1	93.8	8567	81.7	78.0
Kuwait	33,215	2.2	32.9	15098	92.4	66.4
UAE	71,187	3.6	4.5	19,613	45.7	63.3
BAH	8,506	0.7	30.3	116 19	69.8	69.9
QAT	17,321	0.6	58.2	28362	84.2	72.0
Oman	20,290	2.7	16.0	28	77.2	76.7

Sources: Compiled from IMF publications.

Table 3. Selected socio-economic indicators for the Gulf Cooperation Council Economics, 2002

The limited diversification of Gulf Cooperation Council exports offers very limited possibilities of expanding inter−industry trade, hence, the intra−trade between Gulf Cooperation Council countries is considered small in volume (Sherif, 2008 ; Ugo and Zubair 2003). Furthermore, the existence of similar second industries in the different Gulf Cooperation Council countries " could generate long−term detrimental structural overlap" that would stifle efforts to develop regional trade, which makes the trade within the Gulf Cooperation Council block weak compared to other economic blocks (Peterson, 1998). Gulf Cooperation Council trade grew three−fold in the

Source: Al-Uwaisheg, (2003)

Figure 1. Path of Intra-Gulf Cooperation Council Imports, 1986-2001

past 15 years, despite trade barriers. Although the size of intra − Gulf Cooperation Council

imports tripled between 1986 and 2001 − from $2.6 billion in 1986 to $8 billion in 2001 − their share in overall imports remained steady and low, at less than 10% (see Figures 1 and 2).

Between 1990 and 2000, intra−exports and imports in the Gulf Cooperation Council were not smooth; however, data provides evidence of increasing trends in 2001 and a dramatic increase in the period between 2002 and 2004 (see Table 4).
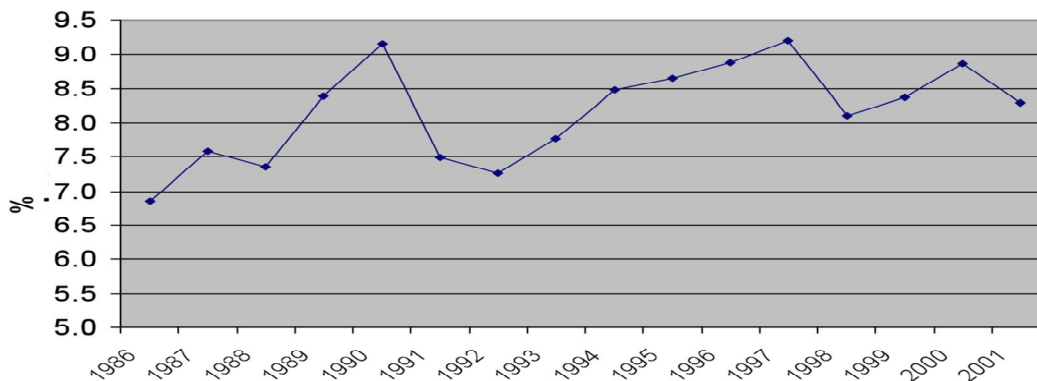
In addition, the period between 1990 and 2003 demonstrated increasing trends in the amounts of manufacturing and high technology exports. The main reason behind those increasing trends is the implementation of the Gulf Cooperation Council customs union in 2003. Furthermore, the number of joint venture projects, total capital investment, and capital investment per project have also increased dramatically after executing a customs union. Although trade can offer opportunities for economic gains, the potential is best realized within an environment that is driven by skilled resources, technological development, and sound government institutions. Without these

Source: Al-Uwaisheg, (2003)

Figure 2. Path of Share of Intra- Gulf Cooperation Council Imports in Total Imports

fundamentals, the pursuit of economic gains through regional integration will likely to disappoint (Baier et al., 2008).

Year	Exports	Imports	Joint Venture Projects Number	Capital	Capital Per Project
1990	4834.5	2703.8	---	---	---
1991	4928.6	3735.6	---	---	---
1992	5557.1	3478.8	---	---	---
1993	6210.6	3891.7	---	---	---
1994	5343.6	4036.7	---	---	---
1995	6255.0	4457.2	---	---	---
1996	7553.0	4709.9	---	---	---
1997	8110.6	5158.5	---	---	---
1998	6603.5	5612.0	---	---	---
1999	7982.2	5531.7	150	2066.2	13.77
2000	7776.9	5700.7	91	290.79	3.19
2001	6394.7	3651.6	206	222.96	1.08
2002	7734.4	7402.7	1013	737.45	0.72
2003	9649.9	8025.6	---	---	---
2004	11934.9	11760.0	583	4529.25	7.76

Source: Data compiled from Gulf Cooperation Council Achievements, 2004.

Table 4. Intra- Gulf Cooperation Council Trade (Exports and Imports) and Joint Venture Projects, 1990-2004 (million $)

Several researchers examined different factors that influence the level of trade among neighboring countries. Even though there has been a significant amount of research on the topic, the current literature exhibits at least two weaknesses. First weakness, no empirical studies have thoroughly examined the factors influencing bilateral trade in the Middle−East context. Second weakness is that only limited factors were simultaneously explored by the current literature. For instance, in the global context Baier and Bergstrand (2009) studied the impact of GDPs and bilateral distance on the free trade agreement. Matyas (1997) finds that population has a tendency to increase trade and the level of specialization by producing gains from specialization. On the other hand, Dell`Ariccia (1999) finds a negative population coefficient. Moreover, Bergstrand (1989) reports a positive GDP per capita coefficient, which means a negative relationship between population and trade flows, suggesting that imports and exports are capital intensive in production. Taking into account the gaps, this research empirically examines factors influencing export in bilateral trade in the Middle−East context. The study simultaneously examines four economic factors, including gross domestic product (GDP), population growth (POP_GR), gross domestic product per capita (GDP/CA), the distance between countries (DIST), and Kingdom of Saudi Arabia Export (KSA_EX).

THEORETICAL FRAMEWORK AND HYPOTHESES

The aim of the study is to shed light on the factors influencing export in bilateral trade in the Middle−East context among the Gulf Cooperation Council countries in their attempt to achieve regional economic integration. The study focuses on the relationships between two Gulf

Cooperation Council countries BAH and QAT, combined as one group, and KSA, which has a relatively larger economic mass and population. The Gulf Cooperation Council bilateral trade framework suggests that trade factors have an impact on export levels. The trade factors included in this study is GDP, population growth (POP_GR), gross domestic product per capita (GDP/CA), and the distance between countries (DIST). According to the Gulf Cooperation Council bilateral framework presented in figure 3, this study proposes the following hypotheses:
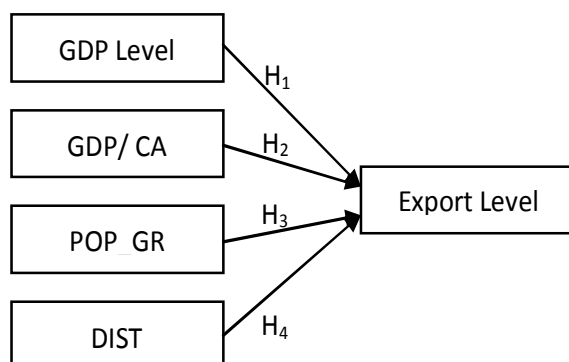

Figure 3. Gulf Cooperation Council Bilateral Trade Framework

In previous studies, the gravity model in its basic form suggests that the volume of bilateral trade between two countries is positively related to their incomes (GDPs). Empirically, previous studies concluded that the conventional gravity model has predicted that the coefficients of the GDP variables of the importers and exporters are positive, indicating that trade increases with the level of the GDP (Siddiq and Vemurim, 2011). Bergstrand (1989) reports a positive GDP per capita coefficient, suggesting that imports and exports are capital intensive in production. According to the Gulf Cooperation Council

bilateral framework presented in figure 3, this research study proposes the following hypothesis.

H_1:   GDP of both countries (Bahrain and Qatar) are positively related to the levels of trade export with the Kingdom of Saudi Arabia.

GDP per Capita and level of export relationship

As argued in earlier studies, the size of the population will have a significant impact. Larger countries tend to be more self–sufficient or, alternatively, for a given level of GDP poorer countries (larger population) trade less than richer countries (Anderson and Van Wicoop, 2004). The empirical study of six big countries in the Organization of the Islamic Conference (OIC) revealed that the GDP per capita of OIC countries in 2007 was more than double the GDP per capita of OIC countries in 1998 (Statistical Yearbook OIC Member Countries 2008, 2009). Hassan et al. (2010) and Mehanna (2003) find positive income per capita coefficients supporting the idea that higher income per capita leads to more trade. According to Mehanna (2003), it is usual to find a positive impact of GDP per capita on bilateral trade flows in the intra–industry trade models, while the comparative advantage theory predicts a negative link because it is based on different factor endowments. Following this interpretation, we can expect a positive link between GDP per capita and trade flows for the intra–Gulf Cooperation Council trade due to the similar factor endowments of many Gulf Cooperation Council countries. According to the Gulf Cooperation Council bilateral framework presented in figure 3, this research study proposes the following hypothesis.

H_2: The GDP_P_CA of both countries (Bahrain and Qatar) are positively related to the levels of trade export with the Kingdom of Saudi Arabia.

Population growth and level of export relationship

Several studies advocated that countries with a larger population tend to buy and sell more than countries with a smaller population. Larger countries trade more with each other than smaller countries as they have a bigger potential for export supply and import demand (Rodrik, 1998). Moreover, the impact of population on trade may also differ depending on the length of the estimation period (short–term vs. long–term). Population may have a positive impact on trade flows in the short–run, while in the long run higher population has a tendency to decrease exports. Matyas (1997) finds that population has a tendency to increase trade and the level of specialization by producing gains from specialization. Furthermore, Kandogan (2008) asserted that there is no question that geopolitics plays an important role in the choices countries make concerning integration. According to the Gulf Cooperation Council bilateral framework presented in figure 3, this research study proposes the following hypothesis.

H_3: The population growth of both countries (Bahrain and Qatar) are positively related to the levels of trade export with The Kingdom of Saudi Arabia.

Distance and level of export relationship

It has recently been argued (Deardorff, 1998) that the relative distances of trading partners have an impact on the volume of trade. Furthermore, larger distances between countries are expected to decrease bilateral trade (Clark et al., 2004; Glick and Rose, 2002; Rose et al., 2000) by leading to higher transportation costs and some other difficulties to trade such as informational and psychological frictions (Huang, 2007). It is well known that transport costs are an important barrier to trade and, therefore, they tend to reduce the level of international trade (Jacquemin and Sapir, 1988; Neven and Röller, 1991). For instance, Baier and Bergstrand (2004a) provide empirical evidence that pairs of countries that are larger in economic size (GDP), more similar in GDP, closer in distance, and more remote from other countries tend to have a free trade agreement and they provide a theoretical rationale for the relationship. According to the Gulf Cooperation Council bilateral framework presented in figure 3, this research study proposes the following hypothesis.

H_4: The distance of both countries (Bahrain and Qatar) is negatively related to the levels of trade export with the Kingdom Saudi Arabia.

METHODOLOGY

The research was based primarily on a quantitative approach using data collected from IMF pertaining to the research hypotheses covering a period of 30 years from 1981–2010. The population for the research included KSA, BAH, and QAT as the Gulf Cooperation Council members. To identify an initial set of items to measure the components of bilateral trade, an extensive literature review was completed.

Therefore, we focus on the relationships between BAH and QAT as a joint group with KSA, which has a relatively larger economic mass and population.

Operational Measures of the Variables

In this section we shall describe items used to measure the variables of this study. Overall, items were divided into five main factors: gross GDP, POP_GR, GDP/CA, DIST, and KSA_EX. Based on the research data we run Exploratory Factor Analysis (EFA) using SPSS program. The primary objective of an EFA is determining the number of common factors influencing a set of measures. Floyd and Widaman (1995) suggested that EFA is most appropriate in the initial stages of model development. At this stage, EFA was applied with Varimax rotation to obtain more easily interpretable factor loadings to see how the 26 variables would converge. SPSS output for an EFA revealed that five factors are clearly defined with moderate loading, shown in Appendix I. All standardized factor loadings were 0.50 or above with the majority falling above 0.60; thus, the loadings can be considered moderate (Bollen and Lennox, 1991). The reliability of each construct was measured with internal reliability coefficients i.e. Cronbach's alpha (α). The coefficient values for the five factors are 0.77, 0.80, 0.75, 0.81 and 0.71 respectively (see Appendix I). In general, all five factors are very clear, showing a significant relationship between those dimensions and the factor loading (see t-value in Appendix I)

Gross Domestic Product (GDP): A six-item scale was used to measure GDP. Each item measured a span of five years. The first item (GDP81_85) measured the period from '81 to '85, the second item (GDP86_90) measured the period from '86 to '90, the third item (GDP91_95) measured the period from '91 to '95, the fourth item (GDP96_00) measured the period from '96 to 2000, the fifth item (GDP01_05) measured the period from 2001 to 2005, and, finally, the sixth item (GDP06_10) measured the period from 2006 to 2010. The factor loadings for the 6 variables, t-values, and internal reliability coefficients i.e. Cronbach's alpha for each GDP dimension, are presented in Appendix I.

Gross Domestic Product per Capita (GDP/CA): A six-item scale was also used to measure (GDP/CA). Similar to the previous variable, each item measured five years. The first item (GP/C81_85) measured the period from '81 to '85, the second item (GDP/C86_90) measured the period from '86 to '90, the third item (GDP/C91_95) measured the period from '91 to '95, the fourth item (GDP/C96_00) measured the period from '96 to 2000, the fifth item (GDP/C01_05) measured the period from 20 to 2005, and, finally, the sixth item (GDP/C05_10) measured the period from 2006 to 2010. The factor loadings for the 6 variables, t-values, and internal reliability coefficients i.e. Cronbach's alpha for each GDP/CA dimension, are presented in Appendix I.

Population Growth (POP_GR): A six-item scale was also used to measure (POP_GR). Similar to the previous measurement, each item measured five years. The first item (POPG81_85) measured the period from '81 to '85, the second item (POPG86_90) measured the period from '86 to '90, the third item (POPG91_95) measured the period from '91 to '95, the fourth item

(POPG96_00) measured the period from '96 to 2000, the fifth item (POPG01_05) measured the period from 2001 to 2005, and, finally, the sixth item (POPG05_10) measured the period from 2006 to 2010. The factor loadings for the 6 variables, t-values, and internal reliability coefficients i.e. Cronbach's alpha for each POP_GR dimension, are presented in Appendix I.

Distance (DIST): A two-item scale was used to measure DIST between Saudi Arabia and two members of the group, BAH and QAT. The first item measured the distance between KSA and QAT (DIS_K_QA) while the second item measured the distance between KSA and BAH (DIS_K_BH). The factor loadings for the 2 variables, t-values, and internal reliability coefficients i.e. Cronbach's alpha for each DIST dimension, are presented in Appendix I.

Kingdom of Saudi Arabia Export (KSA_EXP): A six-item scale was used to measure (KSA_EXP). The first item (K_EX81_85) measured the period from '81 to '85, the second item (K_EX86_90) measured the period from '86 to '90, the third item (K_EX91_95) measured the period from '91 to '95, the fourth item (K_EX96_00) measured the period from '96 to 2000, the fifth item (K_EX01_05) measured the period from 2001 to 2005, and the sixth item (K_EX06_10) measured the period from 2006 to 2010. The factor loadings for the 6 variables, t-values, and internal reliability coefficients i.e. Cronbach's alpha for each KSA_EXP dimension, are presented in Appendix I.

Structural Model of Gulf Cooperation Council Bilateral Framework

The best SEM output model, obtained from LISREL software, accepted for the study is illustrated in figure 4, with the structural model determining the significance of the relationships among the independent and dependent variables. The SEM is a multivariate analysis methodology for empirically examining the sets of relationships represented in the form of linear causal models (Joreskog and Sorbom, 2001). Appendix-II shows LISREL measurement results, which include the factor loadings and t-statistic for the revised constructs. These results indicate that all the factor loadings are positive and significant at the 1 percent level.

Model Identification

Before analyzing the Gulf Cooperation Council bilateral framework structural model, it is important to check the model identification to obtain the correct estimate of the parameter values. The SEM is over-identified with 26 observed variables – there are (26*27)/2 = 351 observations; the number of parameters to be estimated is 56, including the variances of 26 observed variables, 26 direct loading on each latent variable, and a total of four direct effects. Furthermore, six error co-variances were set to free. Thus, the model degrees of freedom are 351 – 56 – 6 = 289 (see Figure 4, *df* = 289). Since the number of observations is greater than the number of parameters to be estimated, we conclude that the Gulf Cooperation Council bilateral model is over-identified and can be tested statistically.

Model Goodness of Fit

The literature mentions many goodness of fit statistics to check the fitness of the model with

the data. The three most commonly used indices are Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Normed Fit Index (NFI). Another goodness of fit statistic is chi-square, which was used in many studies but has severe limitations because it is

dependent variables. The research model presented in figure 4 shows a good fit of GDP, POP_GR, GDP/CA, DIST and KSA_EX to the empirical data. The observed Chi Square was χ^2 = 335.36, the degree of freedom df = 289, the p-value = 0.03136, and the RMSEA = 0.023.
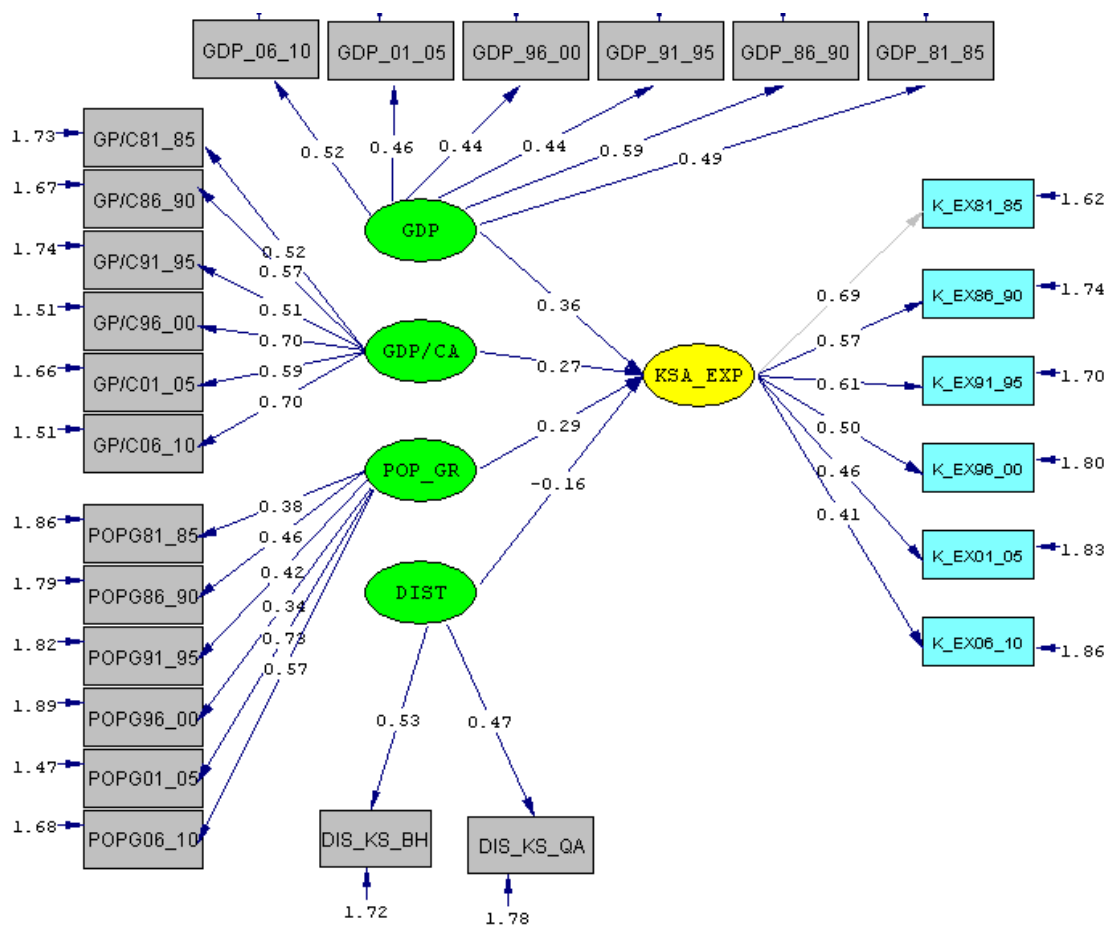
Chi-Square=335.36, df=289, P-value=0.03136, RMSEA=0.023

Figure 4. SEM of Gulf Cooperation Council Bilateral Framework

affected by the size of the data; when the data goes beyond 200 cases, it usually gives a significant result. The best SEM, obtained from LISREL software, accepted for the research model is illustrated in figure 4, with the structural model determining the significance of the relationships between the independent and

Generally, a rule of thumb is that RMSEA ≤ 0.05 indicates close approximate fit and values between 0.05 and 0.08 suggest a reasonable error of approximation (GFI = 0.99, AGFI = 0.93, NFI = 0.98, NNFI = 0.97, and CFI = 0.99); these all represent a good fit (Bentler and Bonett, 1980).

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RESULTS

To test hypotheses H_1, H_2, H_3, and H_4 the regression results and the standardized path coefficients representing the direct effects of each factor dimension GDP, POP_GR, GDP/CA, and the DIST with KSA_EX are shown in Table 5. For hypothesis H_1, the path coefficient for GDP and KSA_EX was 0.36, significant at the 1 percent level and positively correlated. The total nominal GDP of the Gulf Cooperation Council economies has more than doubled since 2001, adding the equivalent of an economy the size of Sweden (World Bank Report, 2010). Furthermore, according to Al Awad (2010), if we look at the profile of overall GDP in these countries we observe that over the past 10 years the importance of the oil sector was growing relative to shares of manufacturing and all other non-oil components in the Gulf Cooperation Council region. The share of oil in real GDP was around 33.5 percent in 1997 and increased to 48 percent in 2007 (Al Awad, 2010).

US$ 15,000 in Oman to US$ 62,000 in QAT (World Bank Report, 2010). For hypothesis H_3, the path coefficient for POP_GR and KSA_EX was 0.29; it was significant at the one percent level and positively correlated. However, for hypothesis H_4, the path coefficient for DIST and KSA_EX was −0.16; it was significant at the five percent level and negatively correlated. Additional factors may contribute to the negative relationships, such as border and customs restrictions. Gulf Cooperation Council members continue to undertake border and customs inspections of other Gulf Cooperation Council members (World Bank Report, 2010). Trade restrictions vary from the requirement that national transportation carriers be used for some products to standard bureaucratic delays in customs clearance. The relative sizes of the three economies, adjacency of the three nations, common history, languages, and customs may, in fact, result in trade volumes even higher than predicted by SEM model.

Kingdom of Saudi Arabia Export Level	Hypotheses Relationship				
	H_1	H_2	H_3	H_4	
	GDP	GPA/CA	POP_GR	DIST	
KSA_EX	0.36** (0.15) 2.13	0.27** (0.10) 2.7	0.29** (0.13) 2.24	-0.16* (-0.084) 1.90	Path coefficient Standard Error t-Statistics

Table 5: Hypotheses Relationships

The Gulf Cooperation Council countries have accumulated large fiscal and current account surpluses in recent years. For hypothesis H_2, the path coefficient for GDP/CP and KSA_EX was 0.27; it was significant at the one percent level and positively correlated. This is not a surprising result, since GDP/CA in 2007 ranged from about

The current results of the regression analysis in this study matched the results presented in earlier studies. The results provide evidence that KSA's exports trade significantly depends on the economic sizes of the other countries and the DIST. Holding other factors unchanged, export volume is likely to increase by about 0.90 with

one point unit increase in GDP for other countries while the exports reduced by 2.53 when distances are higher between KSA and another country (Siddiq, and Vemurim,, 2011).

RESEARCH CONTRIBUTIONS

This research study makes a significant and original contribution to knowledge in the field of economics and social science in a number of ways. The study extends the current literature on economics, which focuses on bilateral trade among Gulf Cooperation Council. This extension is important with the advent of global economy concepts in the last decades, and it will make a solid contribution to the economics and social literature. With the increasing popularity of the global economy concept, the interest in research in this area is a growing concern. Based on the current literature, this research is the first to test the factors influencing levels of trade the Middle-East context. Also, this study is one of the few known empirical study that tests these factors within the Gulf Cooperation Council. The simultaneous testing of the relationships between the proposed factors and the level of export provides key insights into the economic factors necessary to enable Gulf Cooperation Council to achieve higher levels of trade which in turn enhance the global economy.

Since the Gulf Cooperation Council trade is relatively new, no meaningful research has been done to establish comprehensive research to assess the effectiveness of such factors on the export levels (Sherif, 2008). Especially in the Middle-East environment, no comprehensive empirical research has been conducted to assess

such an issue. In this research, a theoretical framework that included several factors that influences the level of trade was identified and the results of statistical analyses were provided to enhance our understanding of the specific effect of bilateral trade on export level in the Middle-East industry. The framework and statistical results will help the academic community to understand the relationships among the constructs and Gulf Cooperation Council managers to understand the potential influences of these factors.

CONCLUSION

In conclusion, our findings include several empirical results regarding the relationships among GDP, POP_GR, GDP/CA, DIST, and KSA_EX. From our study, we can conclude with some degree of certainty that all factors appear to be critical and have a significant influence on the level of export. Trade is fairly intense among the Gulf Cooperation Council countries. Thus, their actions as decision makers may take into account their impact on Gulf Cooperation Council export levels and economic activities. The findings provide evidence of the direct positive effects of the antecedent factors on KSA_EX and the negative relationship of the DIST with KAS_EX. The findings indicate that trade is actually higher than expected on the basis of underlying trade determinants, regardless of the fact that the share of Gulf Cooperation Council intra-trade included in this study is too small in absolute terms. The coefficients of the GDP variables of the importers and exporters are

positive, indicating that trade increases with the level of the GDP. On the other hand, a higher GDP per capita means enhanced demand for differentiated products as well, which has a tendency to increase the level of imports.

However, the potential of trade among Gulf Cooperation Council countries in this study has been exhausted during the early years of the establishment of the Gulf Cooperation Council trade arrangement. The developing member countries with similar incomes would trade more extensively with each other. This result can be partly explained by Hanink's income threshold concept, which argues that the income similarity effect is only applicable to developed countries with very small difference in incomes (Hanink, 1999). The newly created Gulf Cooperation Council Custom Union is, therefore, promising in enhancing new opportunities of trade as it goes beyond the removal of tariffs to the elimination of non-tariff barriers and the establishment of common standards and regulatory regimes.

As these countries become more industrialized, they can then start to produce more manufactured rather than primary goods for export. As Tang (2005) mentions, the emphasis on the production of tradable goods would facilitate high trade between these rapidly growing developing countries in the long run. The bilateral economic and trade relationship with BAH and QAT is of interest to KSA policymakers because of BAH and QAT's proximity to the KSA and because of the strong cultural and economic ties that connect the Gulf Cooperation Council countries.

The negative relationships between the distance and the level of export calls for developing strong infrastructures among the Gulf Cooperation Council countries; elimination of trade barriers, easing entry and licensing restrictions for domestic firms, and the subsequent enlargement of markets would help to attract investment and promote growth in the tradable sector. It would appear that the development of a bilateral relationship among BAH, QAT and the KSA should be motivated strongly by economic considerations (rather than being strategic or event driven). In conclusion, our study provided empirical evidence that all factors are crucial to enhance the bilateral trade among Gulf Cooperation Council countries.

While we hope this study has enhanced the state of empirical research in the context of the economic field, our results should be taken as no more than a preliminary step towards understanding the complex, multidimensional concept of bilateral economic trade relationships among members of the GCC. The measures of GDP, POP_GR, GDP/CA and DIST dimensions used to rate the level of export, are a possible limitation of the research study, therefore, research in this area should try to establish operationally useful measurement criteria to facilitate an empirical study. Since the data of the study was collected from only three Gulf Cooperation Council countries, results of the study may not be able to be directly applied to other countries. The results of this study may vary with the GDP level, population, and geographic locations; this suggests future research opportunities. In addition, a similar study could

be conducted in other countries, which will make it possible to find differences among nations compared to the variables investigated in this study. Future studies in economic filed should focus on examining other factors – in addition to GDP, POP_GR, GDP/CA, and DIST – impact the level of export such as reduced vulnerability to exchange rates.

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APPENDIX-I

SPSS- Factor loading, Standard error, t-value and Internal Consistency (α)

Items and underlying factors		Factor loading			Standard error	t- value	Internal consistency (α)
Factor 1: Gross Domestic Product (GDP)	1	GDP81_85	.509	✔	.080	6.36	0.775
	2	GDP86_90	.660	✔	.158	4.17	
	3	GDP91_95	.632	✔	.111	5.69	
	4	GDP96_00	.727	✔	.266	2.73	
	5	GDP01_05	.687	✔	.151	4.54	
	6	GDP06_10	.634	✔	.165	3.64	
Factor2: Gross Domestic Product per Capita (GDP/CA):	1	GP/C81_85	.557	✔	.167	3.33	0.801
	2	GP/C86_90	.518	✔	.054	9.59	
	3	GP/C91_95	.690	✔	.177	3.89	
	4	GP/C96_00	.567	✔	.097	5.84	
	5	GP/C01_05	.553	✔	.060	8.753	
	6	GP/C06_10	.675	✔	.087	7.75	
Factor3: Population Growth (POP_GR):	1	POP_GR81_85	.570	✔	.181	3.14	0.750
	2	POP_GR86_90	.659	✔	.169	3.89	
	3	POP_GR91_95	.755	✔	.160	4.718	
	4	POP_GR96_00	.554	✔	.152	3.64	
	5	POP_GR01_05	.553	✔	.101	5.02	
	6	POP_GR06_10	.645	✔	.082	7.86	
Factor 4- Kingdom of Saudi Arabia Export (KSA_EXP)	1	KSA_EXP81_85	.627	✔	.106	5.915	0.714
	2	KSA_EXP86_90	.564	✔	.118	4.779	
	3	KSA_EXP91_95	.653	✔	.075	6.820	
	4	KSA_EXP96_00	.795	✔	.067	8.466	
	5	KSA_EXP01_05	.524	✔	.111	4.720	
	6	KSA_EXP06_10	.608	✔	.100	6.080	
Factor 5: Distance (DIST)	1	DIS_K_QA	.684	✔	.084	8.142	0.818
	2	DIS_K_BH	.742	✔	.136	5.455	

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APPENDIX-II

LISREL Measurement Results (SEM)

Constructs	Items	Loadings	Stoddard Error	t-statistics
Kingdom of Saudi Arabia Export (KSA_EXP)	K_EX81_85	0.69	(0.14)	4.93
	K_EX86_90	0.57	(0.15)	3.92
	K_EX91_95	0.61	(0.15)	4.08
	K_EX96_00	0.50	(0.14)	3.59
	K_EX01_05	0.46	(0.14)	3.37
	K_EX06_10	0.41	(0.13)	3.12
Gross Domestic Product (GDP)	GDP81_85	0.49	(0.11)	4.69
	GDP86_90	0.59	(0.11)	5.56
	GDP91_95	0.44	(0.11)	4.15
	GDP96_00	0.44	(0.11)	4.22
	GDP01_05	0.46	(0.11)	4.40
	GDP06_10	0.52	(0.11)	4.93
Gross Domestic Product per Capita (GDP/CA)	POPG81_85	0.52	(0.10)	5.16
	POPG86_90	0.57	(0.10)	5.75
	POPG91_95	0.51	(0.10)	5.10
	POPG96_00	0.70	(0.10)	7.06
	POPG01_05	0.59	(0.10)	5.87
	POPG05_10	0.70	(0.10)	7.04
Population Growth (POP_GR)	POPG81_85	0.38	(0.09)	4.13
	POPG86_90	0.46	(0.09)	5.03
	POPG91_95	0.42	(0.09)	4.59
	POPG96_00	0.34	(0.09)	3.69
	POPG01_05	0.73	(0.09)	7.96
	POPG05_10	0.57	(0.09)	6.22
Distance (DIST)	DIS_K_BH	0.53	(0.13)	4.08
	DIS_K_QA	0.47	(0.12)	3.67