

INTRA-ARAB TRADE AND THEIR ECONOMIC INTEGRATION

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Abstract

The dismantle restrictions and the elimination of trade obstacles have become a common feature in regional trade field. Although many countries in several regions in the world have increased their intra-trade, trade among Arab countries has been a relatively small portion of total their trade. The reasons of the weakness of intra-Arab trade are divided into economic reasons such as variance of GDPs of Arab countries, political reason such as political controversies, and natural reason such as geographical location. Using the gravity model fixed effects regression this paper analysis the determinants of intra-Arab trade during the 1985-2005 period. Despite of existence of possibility for intra-Arab trade expanding, the paper argues that this possibility needs -in addition to other factors- harmonize the economic policies and the procedures of trade implementations among Sub-regional Unions of Arab countries in particular or among all Arab countries overall. The real desire is also required to attain the increasing of intra-Arab trade and then obtain the economic development.

Key words: Arab economic integration; Intra-Arab trade; Gravity model.

I. Introduction

Although regional economic integration initiatives among Arab countries have started for many years ago, intra-Arab trade has been considered a relatively small portion of total Arab trade, both in absolute terms as well as compared with other regions in the world. In which the history of regional economic integration in Arab region demonstrates that the economic integration among Arab countries is dated back to the establishment of the Arab League (1945). What we intend to do in this study is to provide an evaluation of intra-Arab trade. Accordingly, predict whether intra-Arab trade can be extended. The literature of economic integration demonstrated that intra-trade among nations can be considered as a vital path to achieve the economic integration, and then attain the economic development. Applying the gravity model, this study examines the intra-Arab trade as one of the essential ways for the economic integration in the Arab region. The period has been considered in this study is 1985-2005. The paper has been divided into six parts: II pattern of intra-Arab trade, III Sub-regional integration in Arab region, IV restrictions of intra-Arab trade, V specification of gravity model and its modification with intra-Arab exports, VI main empirical results and then VII conclusion.

II. Pattern of Intra-Arab Trade

Since the benefits of the traditional free trade have failed to manifest in developing countries, regional economic integration is considered in the literature as a viable development strategy for these countries. Many countries have dismantled their restrictions on trade as well as on capital flows during 1980s and 1990s decades. Moreover, they liberalized restrictions on foreign direct investment, and deregulated their domestic financial markets. Consequently, the necessity of the regional economic integration has been increased among countries, particularly developing countries that need more integration to achieve the economic growth. The economic integration has been announced by MENA countries, particularly Arab countries since 1950s. According to Venables (2000), regional economic integration is created when two or more countries form a free trade area or a customs union.

Although Arab countries distinct with many similarities such as culture, religion, and the language, they also have some differences, such as natural resources, terms of size, and standard of living. In addition, some of the Arab countries are mainly agricultural countries, such as Sudan and Mauritania, while others are mainly energy producers such as Libya, Algeria and members of GCC, and others have a rising industrial base for example, Egypt and Morocco. The interesting thing is that both intra-regional trade among countries with similarities features such as EU, and among countries with differences features such as NAFTA is higher than trade among Arab countries. In this study, Arab countries have been divided into four sub-groups based mostly on agreements, geographical location and production base. They are namely: (i) Gulf Cooperation Council (GCC), which consists Bahrain,

Kuwait, Oman, Saudi Arabia, Qatar and United Arab Emirates (UAE); (ii) Arab Maghreb Union (AMU), which comprises Algeria, Libya, Mauritania, Morocco and Tunisia; (iii) Arab Mashreq Countries, which include Jordan, Lebanon and Syria; (iv) Other, which contains Egypt and Sudan. Due to unavailability of data, some countries have been omitted in this study. Trade of each country with its subgroup countries is done more frequently than the trade with other Arab countries that are not members in its subgroup. In which the percentage of trade among Maghreb country members is around 67% of their total trade with the Arab countries. In addition, the percentage of trade among Mashreq members is about 33% of their total trade with other Arab countries. Additionally the percentage of trade among GCC members is about 75% of their total trade with other Arab countries. That means most of the intra-Arab trade occurs within these sub-regions. There is some constraints to intra-Arab trade such these constraints as the policy which induces barriers to trade El-Naggar (1992), Fischer (1993), El-Erian and Fischer (1996), and Al-Atrash and Yousef (2000) which indicated to that the policy mainly assumed as barriers to intra-Arab trade. While some Arab countries, particularly the GCC countries adopt a relatively open trade policy, others have obligated considerable trade barriers. trade with rest of the world. The

Maghreb Arab countries, for example, are close geographically, but they found the cost of trade with each other is much higher than making trade with Europe, because some European countries are closer than Arab countries; as a result, trade among Maghreb Arab countries is less than trade between Arab countries and some European countries Al-Atrash and Yousef (2000).

III. Sub-regional Integration in The Arab Region

The agreement tried to encourage both, Arab and foreign investments, as well as increase competition in domestic markets. Therefore, further opportunities job creation and more growth in Arab economies were expected. Accordingly, elimination of tariffs on all imported products of Arab origin was expected. Additionally, exemptions or at least reduce the barriers was also expected, if not, the Intra-Arab trade expansion will be very little. Moreover, the share of non-oil intra-regional trade was expected to be boosted by GAFTA. Even though, it could be obviously observed that, regional economic integration in Arab region in general, and on pan-Arab level in particular, remains weak as a result of the impasse between oil-rich and oil-poor countries. Consequently, sub-regional integration have been emergent in Arab region, such as GCC and MAU.

1- Gulf Co-operation Council (GCC)

Gulf Co-operation Council has been established by Arab countries located in Gulf region in 1981. The governments of GCC approved an economic agreement setting the stage for full economic integration. Therefore, all necessary steps towards obtain full economic integration have been decided to

be taken by GCC governments. They started by a free trade zone which established in 1993. Common currency has been also aimed by GCC governments, in which they adopted this aim in their plan to be attained by 2010. The Gulf Cooperation Council created in order to enhance the economies of Arab Gulf countries, in which one of the Gulf Cooperation Council aims is to coordinate resistance to outside intervention in the economies of GCC members. During the 1980s, the progress towards economic integration was slow. Consequently, the economic had downturn in the region. The Gulf Cooperation Council seeks to strengthen cooperation in several sectors such as security, industry, investment, agriculture, and trade among the member countries. Liberalization of capital and labour flows has been realized, as a result of establishment common policies for investment in projects of petrochemical and industrial. To promote the free trade area, GCC governments have also performed some steps towards common market. Despite of failure of pan-Arab economic integration in general, relatively successful efforts of sub-regional economic integration have been verified.

2- Arab Maghreb Union (AMU)

Mahasneh (1991) mentioned that since Arab countries achieved their independences, in the decades following II World War, the economic integration, and unity have been one of the main ambitions for them. In spite of failure many attempts to achieve economic integration among Arab countries, investigation on efficient forms of economic integration has been done by sub-region Arab countries. One example of such sub-regional economic integration is Arab Maghreb Union (AMU), which established in 1989 by Libya, Algeria, Tunisia, Morocco and Mauritania.

In the Arab Maghreb Union case, the common market is called the Maghreb Economic Space, in which the freedom of mobility of production factors such as labour, goods, services and energy products within the region is foreseen. The members of AMU were aspired to attain the economic growth. Accordingly, they aims, at the beginning, to strengthen their economic and cultural relations, ensure regional stability and increase trade exchanges amongst themselves. On the other hand, to facilitate inter-bank operations within the region, the Governors of the Central Banks of the (AMU) country members signed a multilateral payments agreement. The agreement disposes the modalities of payments between the central banks, and prepares the payment systems of members to be unified as well as provides for monthly settlement of balances amongst the countries without interest. The bilateral arrangements between the participating countries have been allowed. It also provides for the possibility for other Arab countries as well as Africans to join the Union at a later phase. Testas (1998) examined output effects of the Arab Maghreb Union (AMU), judged from the perspective of Algeria. He used an input-output model to derive the sectoral output effects of export expansion (final demand) through (AMU). Testas (1997) found the (AMU) will expand Algeria's exports. Since Algeria's main export is oil (primary product), the expansion of oil exports may cause Dutch Disease¹ in which the heavy

dependence on the revenues of hydrocarbon exports leads to illusion of the real exchange rate, and also a decrease in output and exports of non-oil sectors. Testas (1998) also examined intra-industry trade and its importance for manufacturing and hence economic growth. Testas compared Algeria's sectoral output effects of the (AMU) with UK's sectoral output effects of the EU. The main findings of Testas's study can be summarized as follows: (i) based on the multi-sector model of Corden and Neary (1982), Dutch Disease indications were detected in the economic of Algeria. (ii) based on supply-demand analysis as well as Dutch Disease literature, there is a direct relationship between stability in oil export revenues and stability in income of the specific country.

IV. Restrictions of Intra-Arab Trade

The Arab Region Shortcoming

Institutional reforms are considered as an essential complement to macroeconomic adjustment, and structural reforms. A supportive has been needed for private investment. The environment needs to be enabling to receive institutions commercially oriented. Also, their activities are transparent, predictable, and protected from the political process, in which often the failure of economic institutions in Arab region was due to political reasons, and unable of the environments in the Arab region to create economic interactions, such as intra-trade and intra-investment, in which many impediments have been found in the region. Consequently, the regional economic integration in the Arab region has been weak.

Due to the weakness of adequate institutions, and the lack of legal framework for investment, the transparency in the regulatory environment was very required, as a translation of that, a higher degree of risk and higher transaction costs were percept. Accordingly, it could be said that Arab countries have been suffered from substantial shortcomings in these areas. In the Arab region, trade liberalization has been widely needed. In spite of the successful implementation of openness trade policies in many countries in recent years, few trade liberalization efforts were undertaken in the Arab countries. Trade systems of Arab countries have been characterized by high rates of protection, which led to lack of transparency; as a result, the economies are remaining relatively closed.

The reason of a little ratio of intra-Arab trade is the lack of product complementarity among the Arab countries Bolbol, and Fatheldin (2005). On other side, they also clarified that the trade is highest among Arab members of subgroups, in which the percentage of intra-Arab trade among GCC countries is 75%, and 65% among members of AMU (Arab Maghreb Union), and among Mashreq members is 35%. This reflects two imperative points that should be concerned: the first point is that, Arab countries should freer more than 10% of the trade among themselves. The second point may be is most important; the best preliminary approach of Arab trade integration is through subgroup level.

V. Specification of Gravity Model and its Modification with Intra-Arab Exports

The Gravity Model

The gravity model can be applied to international trade flows from origin i to destination j (Tinbergen, 1962). The model has also been justified by Linnemann (1966), he stated that usually the specification a poor location goes together with high multilateral residuals. As multilateral residuals are obtained from the bilateral ones, countries with poor economic situation should have many of higher bilateral residuals. The gravity model analytical framework is the most commonly used to examine bilateral trade. Although the theoretical foundations were not available until the late 1970s, the gravity model was used and turned out to be successful in explaining international trade. Several steps have been made towards formalization and improvement of the model. Anderson (1979) showed that the gravity model can be derived from expenditure share equations, which assume the commodities are distinguished by place of production. Helpman (1984) and Bergstrand (1985) derive the gravity model from theoretical of trade based on products differentiation. The model predicts that trade between two countries depends on their characteristics, such as their size, the population of each country, and the distance between them. The gravity model of trade in international economics, offers a good application of the spatial interaction method. According to the gravity model, the attraction between two objects is proportional to their mass and inversely proportional to their individual distance. Consequently, the general formulation of spatial interactions can be modified to reflect this essential supposition to form the elements of the gravity model formulation.

$$T_{ij} = K \left[\frac{P_i \times P_j}{d_{ij}} \right]$$

Where T_{ij} is the trade flow from country i to country j , P is the economic mass of each country. d_{ij} is distance between the locations of origin and destination respectively. K is proportionality constant. Related to the rate of the event, the value of K depend on the consideration interval, for example if the same system of spatial interactions is considered, the value of k will be higher if interactions were considered for a year than for a week. Accordingly, spatial interactions between the locations i and j are proportional to their respective importance divided by their distance.

The gravity mode could be extended to comprise several parameters

$$T_{ij} = K \left[\frac{P_i^\lambda \times P_j^\alpha}{d_{ij}^\beta} \right]$$

Where: P , d and K refer to the same variables already mentioned; β (beta) is a parameter indicating transport friction. This parameter is a measure of transport efficiency between two locations. This friction is rarely linear as the further the movement, the greater the friction of distance. For example, if the distance between two locations is a highway, the index will have a weaker beta value than in the case of a local road. λ (lambda) represents the potential to generate movements. In the case of people movements, lambda is often related to the level of welfare. For instance, it is rational to deduce that for retailing flows, a location having higher income levels will create more movements than locations with less income. α (alpha) represents the level of attractiveness; i.e. the potential to attract movements. Regard to the degree of economic activity at the destination, sufficiency of activities is attractive factor. For instance, a centre having important commercial activities will attract more movements. It should be noted that the calibration of gravity model is a significant challenge that is related to the usage of spatial interaction models. In finding the calibration variable, it must be insured that there is no difference between estimated results and the observed flows. Otherwise, the model will be useless so that its predictions or explanations are rendered as insufficient. The empirical evidence is important which indicates that the process of calibration is correct and precise.

In two previous formulations of the gravity models that have been explored, a good flexibility is offered by the simple formulation for calibration since it could be modified by four parameters. Changing beta's value, as well as the value of alpha and lambda will affect the estimated spatial interactions. Moreover, the value of the parameters can change in time because of several factors such as economic development and technological innovations. For example, improvements in transport efficiency lead to reducing the value of the beta exponent; i.e. friction of distance also; economic development will most probably affect the values of alpha and lambda, reflecting mobility growth. Bergstrand (1985) has explained that the Gravity equation has been long recognized for its consistent empirical success in explaining numerous different types of flows, such as migration, commuting, tourism, and commodity shipping. Calibration can also be considered according to several factors such as the age, income, gender, and type of merchandise. A great part of research in transport and regional planning aims at finding accurate parameters for spatial interaction models. Although this is a costly and time-consuming process, it is a very useful one. Once a spatial interaction model has been validated for a region, then it can be used for simulation and prediction purposes. Examples may be calculating how many supplementary flows would be created if the population increased, and if better transport infrastructure was provided. Deardorff (1984, 1995) explained that the gravity model can be derived from about any credible model of trade, and can be used for representing empirical regularities and patterns of trade that are not easily predictable by available trade theories.

The model predicts value of trade between pairs countries i and j depends on several economic variables such as their GDPs, and the distance between them. This model as:

$$T_{ij} = \alpha_0 Y_i^{\alpha_1} Y_j^{\alpha_2} Dis_{ij}^{\alpha_3}$$

Where T_{ij} is the value of trade between country i and country j; α_0 is constant, Y_i , Y_j are real GDPs of country i and country j respectively, D_{ij} is geographic distance between capital cities of countries i and j. The expectation

is that the trade will be positively affected by GDP ($\alpha_1, \alpha_2 \geq 0$), and Negatively affected by distance ($\alpha_3 \leq 0$). Taking logarithms, the gravity model equation can be converted to a linear form for econometric analysis. The basic model takes the form of the following equation:

$$\begin{aligned} \text{Ln (Bilateral Trade Flow)} &= \alpha + \beta \text{Ln (GDP Country i)} + \beta \text{Ln (GDP Country} \\ &\text{j)} \\ &+ \beta \text{Ln (Distance)} + \varepsilon \end{aligned}$$

The model often has been used to evaluate the influence of trade treaties, and it has been also used to test the effectiveness of trade agreements.

Feenstra, Markusen, and Rose (2001) emphasizes that despite the gravity equation's empirical success; there are some theoretical justifications disputes because of less understanding of theoretical foundations in gravity model. While the model form basically consists of a factor that is more related to geographic and spatiality factor, it estimates the pattern of international trade. The model has also been used to test several hypotheses, which relate to purer economic theories of trade as well, such as theory predicts that the relative factor abundances will be affecting the trade.

The Gravity equation will be applied in this study is the following:

$$\begin{aligned} \text{Ln}T_{ijt} &= \alpha_0 + \alpha_1 \text{Ln}Y_{it} + \alpha_2 \text{Ln}Y_{jt} + \alpha_3 \text{Ln}D_{ij} + \alpha_4 \text{Dum}_1 + \alpha_5 \text{Dum}_2 \\ &+ \alpha_6 \text{Dum}_3 + \alpha_7 \text{Dum}_4 + \varepsilon \end{aligned} \quad (5)$$

where:

T_{ij} is Export from country i to country j, α_0 is constant, Y_i is real GDP of country i, Y_j is real GDP of country j, D_{ij} is distance between their capital cities. Dum_1 represents a Share Border, it takes value of one if pair countries are sharing border and takes zero otherwise, Dum_2 is Sub-regional Union (GCC or AMU). This dummy takes value of one if at least one of the pair countries is a member of Sub-regional Union (GCC or AMU). Dum_3 is Oil-

exporting, it takes value of one if at least one of the pair countries is oil-exporting country and Dum_4 represents the political instability, it takes value of one if the exporting country distinct with political stability during the year concerned, and takes zero otherwise, ε is error term. Some Dummies are ignored for certain countries in order to adequate the model.

VI. The Main Empirical Results

Overall the performance of the model is quite good, from the empirical results of estimating of equation (5) for intra-Arab Exports, it can be seen that the intra-Arab exports increases with foreign GDP for all Arab countries with exception of Saudi Arabia, Syria and Egypt. However, Domestic GDP significantly negative affects intra-Arab exports for some countries in each sub-group of the Arab region, for example from GCC sub-group Bahrain, and United Arab Emirates (UAE). From (AMU) sub-group Algeria and Libya. Lebanon and Jordan from Mashreq sub-group. Sudan, which is classified other group in this study. As expected intra-Arab trade negatively affected by distance. However, strange results are gotten for both Libya from AMU sub-group and Lebanon from Mashreq sub-group, which is their both trade with Arab countries shown significantly positive affected by distance. The vicinity attributes, as proxied by border has been shown that it significantly affects intra-Arab trade, in which the results show that countries with common border are trend to trade more with each other with exception of Algeria and Syria. The most important finding is that sub-regional union significantly affects the intra-Arab trade for almost all countries in the region with exception of UAE and Jordan. Furthermore, the attribute of production similarity - as proxied by oil-exporting- boosted this dedication for almost all countries, in which countries exporting oil significantly negative trade with each other. On the other hand, countries do not export oil significantly positive trade with oil exporting countries. Although many important political events have been occurred in the region, such as Gulf War one and two, invocation of Iraq by USA, internal war of Sudan and the economy embargo on Libya political instability variable show insignificant relationship with intra-Arab trade with exception of Libya.

VII. Conclusion

The analysis presented in this study indicates that intra-Arab trade is less than what the model predicts. This reveals that Arab economic integration can be enhanced through their intra-trade if the percentage of intra-trade increased by decreasing the gap among Arab GDPs, coordinate their trade policies and consider a plan between sub-groups. According to the model estimation, the production similarity indicates that intra-Arab trade is not what should be, especially among GCC countries. Therefore, intra-Arab trade can be increased if Arab countries diversify their production. Thereby, they can achieve their economic integration. Based on the predicts of the model, the Arab country members of sub-group trend to trade more with each other with exception only of Libya. Regards to case of Libya, the plausible interpretation is that due

to political and economy embargo on Libya. The UN sanction on Libya was started in 1986 and lifted in 2003 followed by ending of the American embargo in 2004. Because of the Arab countries crestfallen Libya with its aim of Arab unity, Libya has changed its trend to Africa rather than to Arab, with exception of Egypt, which obviously can be seen that through dummy One and dummy Two that trade of Libya is significant negative with AMU countries. On the other hand, it is significant positive with its share border. The interesting finding in this regard is that in Libya's case the relationship between intra-AMU exports and the distance is significantly positive. This may be because Libya trades more with Arab countries that are not close, such as Lebanon; this deduction may be enhanced by sub-regional union variable, which reveals that Libya is significantly negative trades with AMU countries concerned in this study (Algeria and Morocco). Although Algeria located very close to Libya, and due to similarity of production between Libya and Algeria (Oil), Libya trend to trade more with other Arab countries rather than Algeria. This indication can be also seen through production similarity as proxied by oil-exporting, which has been shown in Algeria's case.

Arab economic integration can be extended through their intra-trade whenever more coordination and trade liberalization are occurred between Arab sub-groups and the other Arab countries are not members in these sub-groups. Although our model includes some economic variables and some dummy variables, which measure intra-Arab trade obstacles and they are statistical significant, it does not include variable that measure the tariff procedures of intra-Arab trade or variable that measure the trade agreements between Arab countries and rest of the world, which may affect intra-Arab trade and their economic integration. This is a ripe area for future research.

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Notes

1 Dutch Disease is an economic phenomenon involving the exploitation of natural resources and a decline in the manufacturing sector. The theory is that an increase in revenues from natural resources will de-industrialize a nation's economy by raising the exchange rate; as a result the manufacturing sector will be less competitive. However, it is extremely difficult to definitively say that Dutch disease is the cause of a decreasing manufacturing sector, since there are many other factors at play in the economy. Dutch Disease indications were detected in the Algerian economy.

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Regression results (Panel Least Squares Fixed Effects) gravity model for intra-Arab Export (Ln Tij)

Independent Variables	Constant (t-statistics)	GDPi Coefficient (t-statistics)	GDPj Coeff. (t-statistics)	Dij Coeff. (t-statistics)	Dum1 Coeff. (t-statistics)	Dum2 Coeff. (t-statistics)	Dum3 Coefficient (t-statistics)	Dum4 Coeff. (t-statistics)
GCC Bahrain N : 126 AdjR ² : 0.95 D.W: 2.52 F: 235.54	-11.37 (-2.39)	-0.73 (-13.53)***	2.55 (4.82)***	-0.12 (-0.65)	3.86 (25.92)***	0.94 (4.20)***	...	-0.11 (-0.83)
Kuwait N : 126 AdjR ² :0.61 D.W: 2.24 F: 18.87	13.61 (1.97)	0.31 (2.58)***	0.98 (1.54)	-3.25 (-9.61)***	2.90 (10.04)***	...	-2.83 (-7.14)***	-0.40 (1.61)
Oman N : 168 AdjR ² :0.84 D.W: 2.05 F: 76.90	-40.36 (-2.41)	0.07 (1.05)	5.92 (3.48)***	-2.08 (-8.69)***	1.92 (9.46)***	...	-0.47 (-1.73)*	...
Saudi Arabia N : 189 AdjR ² :0.59 D.W: 1.28 F: 16.46	18.72 (1.50)	0.27 (3.91)***	-0.90 (-0.68)	-1.17 (-7.31)***	0.30 (1.33)	...	-0.82 (-3.57)***	0.01 (0.05)
UAE N : 168 AdjR ² :0.71 D.W: 2.34 F: 33.26	-5.22 (-0.43)	-0.20 (-2.25)**	1.20 (1.11)	-0.29 (-0.93)	2.16 (11.94)***	0.12 (0.29)	...	0.21 (1.09)
AMU Algeria N : 147 AdjR ² :0.61 D.W: 2.31 F: 18.30	-5.92 (-0.15)	-0.62 (-4.72)***	4.40 (1.25)	-4.05 (-4.94)***	-7.31 (-5.52)***	2.35 (5.03)***	-2.72 (-6.23)***	0.74 (1.77)
Libya N : 147 AdjR ² :0.56 D.W: 2.18 F: 16.20	-15.05 (-1.57)	-0.35 (-1.63)*	0.02 (0.13)	2.72 (2.31)**	2.69 (4.42)***	-3.59 (-4.99)***	...	-0.36 (-0.94)*
Morocco N : 126 AdjR ² :0.65 D.W: 2.76 F: 24.77	76.76 (3.44)	0.57 (4.97)***	2.61 (1.30)	-13.08 (-9.06)***	5.00 (8.56)***	-0.18 (-0.56)
Mashreq Syria N : 126 AdjR ² :0.39 D.W: 2.19 F: 8.94	8.71 (1.52)	0.39 (1.51)	-0.05 (-0.16)	-1.38 (-2.93)***	-2.00 (-1.57)	0.54 (0.56)

Lebanon N : 84 AdjR ² :0.72 D.W: 1.84 F: 25.48	-12.51 (-2.16)	-0.24 (-2.24)**	1.08 (2.12)**	0.86 (2.19)**	...	-1.44 (-4.60)***	0.76 (3.20)**	0.46 (1.49)
Jordan N : 189 AdjR ² :0.43 D.W:1.68 F: 11.10	-34.15 (-1.68)	-0.11 (-0.74)	4.42 (1.93)*	-0.18 (-0.51)	1.72 (6.55)**	-0.46 (-0.69)	...	0.13 (0.62)
Other Egypt N : 105 AdjR ² :0.43 D.W:2.02 F: 8.96	15.48 (0.63)	0.71 (4.24)***	-0.83 (-0.39)	-1.34 (-1.88)*	0.45 (0.93)	...	-0.38 (-1.29)	-0.14 (-0.41)
Sudan N : 189 AdjR ² :0.53 D.W: 2.03 F: 17.20	-2.31 (-0.12)	-0.04 (-0.30)	5.35 (2.86)***	-5.91 (-8.04)***	0.99 (2.18)**	2.16 (10.76)***

(*) indicates a significant at 10 per cent, (**) indicates a significant at 5 per cent, and (***) indicates a significant at 1 per cent.

Appendix 1: Map of The Arab Region



Source:http://www.allnewspapers.com/worldmedia/Middle_East/Arab_World/Arab_Map/