

Economic Performance of the OIC Countries and the prospect of an Islamic Common Market

M. Kabir Hassan¹, Benito A. Sanchez² and M. Ershad Hussain³

This paper examines economic performance of the OIC member countries and analyzes the prospect of Islamic common market by analyzing trade data within a gravity model framework. There is scope of trade creation for OIC member countries if all impediments to trade and business can be eliminated. The paper also examines various sub-regional grouping within the context of gravity model, and finds that D8 comprising eight bigger OIC member countries is trade creating. For example, two countries in D8 block would trade 4.28 times more among themselves than two otherwise-similar country in outside the block would. The paper suggests a number of policy parameters which if followed will lead to more trade among member countries. The issue of Islamic common market should be examined further in light of new data and changed global perspectives. This paper is complements and extends Hassan (1999, 2009) and Hassan and Islam (2001), where similar conclusions were derived and policies were suggested.

1. Introduction

Islamic countries are heterogeneous with respect to economic, political, ethnic, social and cultural realms. However, all are bound by Islam. This diversity could be a major hurdle to Islamic Common Market (ICM). Such roadblock could be turned into economic opportunity through

¹ Department of Economics and Finance, University of New Orleans, New Orleans, LA 70148, USA.

² Department of Economics and Finance, Kean University, Union, NJ, 07083, USA.

³ Department of Economics and Finance, Dillard University, 2601 Century Boulevard, New Orleans, LA 70122.

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objective realities, strong political will and irreversible commitment. The emergence of ICM would harness free flow of goods and services, capital, entrepreneurship, labor and technology among member nations.

Like other successful trading blocks, OIC countries have cultural and socio-economic homogeneity. However, they are a mixture of low income, middle-income and high income countries. Apart from trade liberalization successful integration of policy-determined barriers (e.g. tariffs, quotas and other non-tariff barriers) and natural barriers (e.g. transport costs, linguistic and institutional differences) a prerequisite for inclusive analysis of feasibility and prospective economic gains from economic cooperation of OIC member countries. The study will have important implications for policy making about the future course in economic cooperation among the OIC member countries. Profound empirical research have yielded a wealth of knowledge, insightful economic analysis, practicable policy guidelines and a compelling evidence for justifying the need for ICM [Alatas (1987); Nasser (1988); Mdaghri (1988); Zaman(1988); Siddiqui (1993); Shakweer (1993); Sadeq (1993); Syed (1999); SESRIC (2008, 2000, 2003), Shalaby (1988); Cindoruk (1988, 1992); Ahmad (1995); Anjum (1996); Ahmed and Urugel (1996); Ariff (1998); Naqvi (1998); Mehanna and Hassan (2002); Hassan (2003a,b); Hassan and Islam (2001); Hassan (2001); Hassan (1999); Hassan (1998a,b) Hassan (2001, 2009)]. No research, however, has formally analyzed trade creation and diversion among OIC member countries. The low level of trade is largely attributable to inadequate trade information, the tariff and non-tariff barriers, unstable and narrow export bases, and over reliance on OIC non-member countries for trade. This has exacerbated long-term economic relations among OIC member countries. Moreover, globalization and assimilation of OIC members into the world market have chipped away the intra-OIC trade volume as the trade volume with the rest of the world grows astronomically.

Following introduction, we provide detailed trade statistics among the OIC countries in Section 2. Section 3 discusses various existing economic blocks among the OIC countries. In Section 4, we present a gravity model type analysis of potential benefits of forming economic groupings among the OIC member countries. In Section 4, we provide the results of a gravity model of trade creating and trade diverting potentials of existing and future economic blocks of the OIC countries.

We discuss recommendations and policy options for establishing Islamic common market in Section 5.

2. Economic Performance of the OIC Countries

2.1. Economic Growth of OIC Countries

The economic performance of the OIC is examined in 3 sub-groups in order to illustrate the developments within the OIC better. The first group is classified as the Least Developed Members of the OIC, which will be named, hereafter, as the LDC group of OIC. This group is made up of those members of the OIC which are designated as least developed by the United Nations, namely Afghanistan, Bangladesh, Benin, Burkina Faso, Chad, Comoros, Djibouti, Gambia, Guinea, Guinea-Bissau, Maldives, Mali, Mauritania, Mozambique, Niger, Senegal, Sierra Leone, Somalia, Sudan, Togo, Uganda and Yemen. The second group includes, generally, the middle-income OIC countries, which will be named, hereafter, as the middle-income (MDC) group of OIC. These are Albania, Cameroon, Côte d'Ivoire, Egypt, Guyana, Indonesia, Jordan, Kazakhstan, Kyrgyz Rep, Lebanon, Malaysia, Morocco, Pakistan, Palestine, Surinam, Syria, Tajikistan, Tunisia, Turkey, and Uzbekistan. The third group comprises the oil-exporting (FEC) members of the OIC, namely Algeria, Azerbaijan, Bahrain, Brunei, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Oman, Qatar, Saudi Arabia, Turkmenistan, and the United Arab Emirates (U.A.E.).

Real GDP, GDP per capita and GDP growth rates of OIC countries are given in Table 2. One striking result of these tables is that OIC GDP contribution to total world GDP is very low (4.7% of total world GDP for the period 1980-2007). Among the OIC countries, MDC performance is better than FEC.

During the period under consideration, the OIC countries' total population grew at nearly 2.2 percent per annum whereas the world population grew at 1.5 percent per annum (see Table 3). OIC countries' population has been growing a higher rate than the rest of the world.⁴ When the effect of such a high rate of population growth on economic

⁴ This is typical of low income countries, which is not surprising because many of the OIC countries are considered low income countries.

growth is taken into account, the OIC's average per capita income turns out to be an average of \$1139 during the period 1980-2007. The real GDP per capita has steadily increased during the period because the real GDP has grown at a higher rate than the population (see panel C of Table 2). However, when these per capita GDP numbers for the OIC countries are compared with the world average, a significant gap is observed against the OIC group.

2.2. Sectoral Distribution of the Output of the OIC Countries

Table 4 provides sectoral distribution of output. From this table, we note that the services sector is an important source of income in almost all the OIC countries, irrespective of their levels of income and development (see panel D). Second, agriculture is observed to be an important activity mostly in the LDC group and industry in the oil-exporting group. However, the significance of industry in the oil-exporting group comes from oil production. Third, the manufacturing sector does not play a significant role in most of the OIC economies. Yet, in some OIC countries, particularly in the middle-income group, it is gaining importance.

2.3. Inflation of the OIC Countries

Inflation in high income countries decreased significantly from nearly 6.6 percent in the 1980s to 2.9 percent in the 1990s and further down to 2.6 percent in the 2000s (see Table 5). Inflation in OIC countries reached its peak values in the late 1990s because of the hyperinflation suffered by some members. Excluding hyperinflation years, OIC countries downed inflation from 16 percent in the 1980s and the 1990s to 6.4 percent in the 2000s. The MDC group has the highest inflation increase in the 1990s, but the group has decreased the level to one digit inflation rate.

2.4. Current Account and Reserve Position of the OIC Countries

Table 6 summarizes the current account balance, the international reserve position of the OIC countries, and the direct net trade in goods and services. Although, approximately, two thirds of the OIC countries had to cope with deficits in their current account balances in the 1980s and 1990s, the current account became positive in the 2000s due possibly to

compensating developments in their capital accounts. Also, OIC countries experienced improvement in their reserves during the 2000s due to the increase in MDC and FEC. However, the same levels of deficit in current account (and trade) are observed for LDC.

2.5. Total Outstanding External Debt and Foreign Direct Investment of the OIC Countries

Table 7 shows total debt and foreign direct investment. Regarding the total external debt, it stood from 414.6 in the 1980s to 626.1 billion US dollar in 2002s for OIC countries (a 51 percent increased), following a middle income countries pattern. The figures actually reflect the heavier burden of the external debts for OIC countries. Moreover, debt is still a heavy problem for the economies of the OIC countries mainly MDI.

The foreign direct investment is relatively low when it is compared to low income and middle income countries. Furthermore, the foreign direct investment is higher for the MDC group than the FEC and the LDC groups. Although FDI has significantly increased since the 1980s, the total FDI in OIC countries represent only 14 percent of middle income total FDI, suggesting that investors are allocating more money to non-OIC countries.

2.7. Aggregate Exports and Imports of the OIC Countries

Table 8 displays real import, export and trade as a percentage of GDP. The OIC countries' exports, equaling an average of \$774.7 billion, represent 9.4 percent of the world exports in the 2000s. This percentage was 10.8 percent in 1980s and decreased 7.3 percent in the 1990s. Furthermore, the same average indicates that OIC countries have increased their level of export by more than a 100% during the 2000s compared with 1980s and the 1990s. Meanwhile, the worldwide level of export has increased 55 percent, which shows that the OIC countries were able to benefit enough from the enlargement of the world trade in these years.

Figure 1 shows annual change in real export and import level. During the period under consideration, the highest rate of increase in world exports was recorded in 2004 whereas for the OIC export was the year 2000. OIC countries growth rate is highly correlated with world growth;

whenever there is an increase in the world export, the OIC has increased its level of export. This change is highly sensible to change in the world. Particularly in the 2000s, the world has experienced growth and the OIC countries have more than proportionally increased their levels. Nevertheless, in the 1980s the world declined in export level and OIC countries declined more than proportionally as well. This suggests that export activities in OIC countries are more affected by change in the world demand for merchandise.

Regarding the performances of the OIC sub-groups, all of them managed to accelerate their rates of export increase during the 2000s. After reaching peak levels in 2000, they could not preserve these high figures, and all of them suffered deceleration in their exports to a negative percentage change.⁵ Then they started a recovery process to cover the negative rate of change and get close again to the peak in 2000, at the end of the period under consideration, they realized rates of increase between 29.0 and 33.2 percent. The highest annual rate of increase in 2004 was observed in the FEC group amounting to 33.2 percent, followed by a 29.8 per cent annual increase in the MDC group, 29.0 per cent increase in the LDC group.

Among the OIC countries themselves, the FEC represent the highest share of the total export of the OIC countries, it ranged between 56 and 70 percent, then the MDC have the second share of the OIC total export and have a range between 27 and 48 percent, the lowest share was for the LDC which represent less than 3.3 percent during the period under consideration.

On the other hand, the OIC imports increased from an average of \$364.4 billion in the 1990s to an average of \$594.8 billion in the 2000s, which represents an increase of 63 percent. The OIC share in world imports followed the same trend, increasing 55 percent compared to the 1990s.

Panel B of Figure 1 shows real import growth change for both OIC countries and the world. Similar to the developments in the export side of the picture, the OIC countries' imports, in general, accelerated in the 1990s. More important, after 1988 the change of OIC import moves with the change of world import. During the period of our study and we have

⁵ The yearly change is available upon request

a negative rate of change for the MDC in year 2001. The same trend is also observed in other groups of countries. This period appears to be a very active year for world exports and imports. But a sharp slowing down is observed in year 2001. The general trend in the middle income countries is similar to that in the OIC countries.

As a result of the developments in exports and imports summarized above, the trade balance of the OIC countries fluctuated widely in recent years and recorded surpluses in the 2000s. Particularly, FEC have experienced high level of surpluses in the 2000s. Also, MDC have shown an average surplus in the 2000s after averaging deficit in the 1980s and 1990s.

Trade as a percentage of GDP also shows the same history. MDC and FEC have increased their level of trade whereas LDCs have not changed. There are a number of impediments to trade among the OIC countries. First, most of the OIC countries are poor. Second, there is lack of reliable and updated trade information among these countries. A database at the commodity level must be created so that it can be ascertained where excess demand exists in certain commodities and the member countries can trade that commodity among themselves. Third, there are limited opportunities for business contacts among the private bodies of the OIC countries. Exhibitions are not organized on a regular basis so that such contacts can be established. Fourth, there exists lack of marketing and distribution skills among the business people of the OIC countries. Products do not always meet buyer specification or international standard concerning packaging, color, style and environmental standard. Finally, the exportable of many OIC countries are not diversified. For many OIC countries, a small number of products account for significant amount of their exports.

3. Preferential Trading Agreements among OIC Countries

Contemporary and future regional economic blocks are based more on civilization identity as a sufficient condition while cultural and religious links play a pivotal role. EEC has evolved from covering 2 goods (coal and steel) among six countries (Belgium, Luxembourg, France, W. Germany, Italy and the Netherlands) to includes all Western European countries, Southern European Countries and is becoming a melting pot by including Eastern European countries as well Muslim-dominated but liberal Turkey.

Notably, European Community rests on the shared foundation of European Culture and Western Christianity. Chinese/Confucian oriented culture countries such as China, Hong Kong, Taiwan, Singapore and the overseas Chinese communities in other Asian countries experienced rapid economic expansion due to shared culture while Economic Cooperation Organization (ECO) consisting of ten non-Arab Muslim countries, (Iran, Pakistan, Turkey, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan and Afghanistan) all have common culture and religion. OIC has taken similar front in forging a common market. There are two major trading blocs; 1) OIC consisting strictly OIC member countries. 2) Other blocs in which OIC member countries participate.

3.1 Regional Groups within OIC Member Nations ONLY.

This consist of four major sub-groupings namely the Arab Maghreb Union (AMU), Council of Arab Economic Unity (CAEU), the Gulf Co-operation Council (GCC) and Economic Co-operation Organization (ECO). GCC was established with the sole aim of forming a customs union first and then a common market (See Table 1B). The ECO is specifically a preferential trade agreement where member countries afford each other a preferential treatment on some designated products from the member countries.

The AMU established Maghreb Economic Space to serve as a common market with free movement of labor, goods, services and energy products. AMU aims to foster economic and cultural relations, regional stability, increase trade exchanges, and a unified multilateral payments system through regional central banks. The most pressing priority of CAEU is to establish a customs union by removing all trade restrictions such as quotas and the restrictions on residence, employment and transport to ultimately establish a common market.

The GCC, like AMU, seeks to establish common market with free movement of goods, services and factors of production. To this end, GCC codify regulations in various fields including, inter-alia, economic policies and financial policies, agriculture, industry, trade policies, communications, education and culture, social and health affairs, information and tourism, and legislative/political and monetary policies to ensure regional security and stability. The ECO is essentially a preferential trade area working towards gradual and progressive removal

of custom tariffs and trade in order to expand intra- and inter-regional trade.

3.2 Regional Groups among OIC Member and Non-Member Nations:

This consists of fourteen regional economic blocs ((Table 1C) spread across Africa (nine) and Eurasia (five). They are the African Economic Community (AEC), the Central African Customs and Economic Union (UDEAC), the Common Market for Eastern and Southern Africa (COMESA), the Economic Community of Central African States (ECCAS), the Economic Community of West African States (ECOWAS) and the West African Economic and Monetary Union (WAEMU)- all from Africa, are designed to establish a common markets or economic and monetary unions; Others from Africa are Mano River Union (MRU) whose objective is to set up a customs union, The Indian Ocean Commission (IOC) which aims to establish a preferential trade area, and the Cross-Border Initiative (CBI) free trade area. In Euro-Asia, the Association of South East Asian Nations (ASEAN) and the Commonwealth of Independent States (CIS) aim to form customs union while the Black Sea Economic Co-operation (BSEC), the East Asian Economic Caucus (EAEC), and the South Asian Association for Regional Co-operation (SAARC) all seek a preferential trade area or a simple regional economic co-operation.

3.3. Lessons from OIC Countries Sub-regional Groupings:

The primary rational and justification for any economic integration is attainment of higher economic growth rate and development. Economic co-operation within OIC member states only and between OIC and other developing countries have registered mixed results with some being highly progressive and successful while others have recorded lackadaisical performance, perhaps because national policies have been rigidly allowed to reign over common economic bloc policies (Ahmed and Urugel, 1996; Farid, 1993).

In a concerted effort to achieve economic integration, OIC countries have faced three notable difficulties; (a) Effective co-ordination of regional investment. This is vital for reduction of cost of production through establishment of regional industries, equitable distribution of the integration gains and eventual creation of economic equilibrium among

member nations. (b) The need to compensate member countries which may suffer losses in the early stages. Any economic integration is meant to bridge the gapping economic divide among member states. Therefore, financial compensation measures should be put in place to compensate economically weaker members. However, with most of OIC members being developing economies, it's difficult to make such compensation without external help. (c) Gradual drive towards surrender of powers by member countries to take economic and social decisions at regional level. This would involve agreement to abolish all the tariffs on each other's exports, follow a common tariff policy towards their imports from the rest of the World, and allow a free flow of goods, services and factors of production. These major hindrances are exacerbated by conceptual and practical difficulties ranging from underdeveloped regional transport and communications network, trade and industrial protectionist policies, competitive industrial structures, natural resources of each member country, unrealistic exchange rates and in extreme cases, lack of basic economic statistical data to make reliable assessment of justification for regional economic integration. Instructively, more than two-thirds of the OIC member countries have been associated with regional and sub-regional economic co-operation and integration schemes, and, interestingly but understandably, the Least Developed OIC countries feature in many of them. This is a valuable indication of political will and inclination for advanced forms of economic integration and cooperation. To this end, initial endeavor has been directed towards a host of economic co-operation areas ranging from trade preferences, joint-ventures, co-ordination and harmonization of economic and monetary policies to financial co-operation. The next step should be geared towards attainment of two major goals; creation of powerful economic entities which can withstand the challenges posed by the emergence of huge economic blocs and; structural transformation of the OIC countries' economies to attain economic efficiency, social welfare and development co-operation and eventually, the dream of ICM would be easier to realize.

4. The Gravity Model of OIC Member Countries' Various Groupings

4.1. Methodology and Data

Gravity model offers a systematic framework for measuring the normal pattern of trade. International trade flows are determined by

comparative advantage, possibility of intra industry trade, transport cost etc. Trade policy may revise the normal trade flows. A gravity model of international trade estimates the trade flow as a function of variables that directly or indirectly affects the determinants of normal trade flow. We can use the gravity model to examine whether a lower magnitude of intra-OIC trade is a normal outcome or not.

The gravity model has long been used for empirical studies of the pattern of trade. Specifically, the volume of trade between two countries should increase with their real GDPs (the so-called gravity variable), since large countries should trade more than small ones, and with per capita incomes, since rich countries should trade more than poor ones. It should diminish with geographical distance because proximity reduces transportation and information costs. Since the dependent variable in the gravity model is bilateral trade between pairs of countries, each variable (other than distance) is entered in product form. Researchers then add dummy variables for participation in various preferential arrangements. If one finds a positive coefficient on the dummy variable indicating that two countries, both of which participate in the same preferential arrangement, trade more with one another than predicted by their incomes and distance, then the conclusion drawn is that the arrangement is trade creating for its members. If there is a negative coefficient on the dummy variable indicating that only one member of the pair participates in a particular preferential arrangement, this is taken as evidence of trade diversion vis-a-vis the rest of the world. (Bayomi and Eichengreen, 1995; Eigengreen and Irwin, 1996).

The typical gravity model specification relates bilateral trade to income, population (or per capita income), distance and congruity between the trading partners:⁶

$$TRADE_{i,j} = (GDP_i * GDP_j)^{\beta_1} (PCI_i * PCI_j)^{\beta_2} DISTANCE^{\beta_3} e^{(\sum \beta_h DUMMY_h)} v_{ij} \quad (1)$$

where $TRADE_{i,j}$ is the bilateral trade between country i and partner j at time t (measured in U.S. dollars), GDP is real gross domestic product (the so-called gravity variable), PCI is per capita income, $DISTANCE$ is distance between the two countries, and $DUMMIES$ are dummy variables that take into account other factors representing factors that

⁶ We will use a time varying version of the gravitational model. However, time subscript is not displayed for better clarity

affect trades (e.g. treaties, preferences, etc.), finally ν is an error (stochastic) term.

The traditional approach is to take natural log on both sides and use OLS to estimate the parameter:

$$\log(\text{TRADE}_{i,j}) = \beta_1 \log(\text{GDP}_i * \text{GDP}_j) + \beta_2 \log(\text{PCI}_i * \text{PCI}_j) + \beta_3 \log \text{DISTANCE} + \sum_h \beta_h \text{DUMMY}_h + \nu_{ij}$$

However, OLS has a few drawbacks. First, when there is no trade between two countries (trade=0), the observation cannot be used in the OLS estimation the model (e.g. that information is lost). Second, it suffers from heteroskedasticity. And more importantly, Santos, Silva and Tenreyro (2006) show that estimating the log-linearized equation by least squares (OLS) can lead to significant biases. They suggest that the model should be estimated in its multiplicative form:

$$\text{TRADE}_{i,j} = \exp \left(\beta_1 \log(\text{GDP}_i * \text{GDP}_j) + \beta_2 \log(\text{PCI}_i * \text{PCI}_j) + \beta_3 \log \text{DISTANCE} + \sum_h \beta_h \text{DUMMY}_h \right) \nu_{ij}$$

We estimate the model above using Poisson pseudo maximum likelihood. The main advantage is that zero observation can be used and Santos, Silva and Tenreyro (2006) shows that the model is well-behaved. We include the following set of dummies variables: *BORDER*: countries have common border, *SEA*: one of the partner has sea shore. As trade is expected to increase with size of domestic economy (*GDP*), per capita income (*PCI*), common border (*BORDER*) and sea shore (*SEA*) and to decline with distance (*DISTANCE*), $\beta_1, \beta_2, \beta_3$, and β_5 should be positive, whereas β_3 should be negative. We study the period 1980-2007 and the sub-period 1980-89, 1990-99, and 2000-07 and include time-year dummy variable to capture time-year fixed effect.

Annual data on bilateral trade flows among OIC countries has been collected from IMF's Direction of Trade Statistics. The rest of the data comes from the WDI database. Also, a substantial amount of data has also been collected by hand from different various documents.

Gravity model, however, has a number of weaknesses. One is that the coefficients on dummy variables for subgroups of countries will pick up all respects in which those countries differ in their trade performance that are not controlled for in the gravity equation. Dummy variables for preferential arrangements serve as a catch basin for omitted factors; and thus, we include a series of dummies to capture these arrangements. Another difficulty is the measurement of distance. The underlying theory appeals to transaction costs to trade, and in empirical implementation it is posited that such costs should rise with distance. But economic and geographic distances are not the same. Insofar as economic distance is mismeasured, its effects may be loaded into the dummy variables intended to capture the effects of regionalism. The third problem is the omission of third country effects. It is generally assumed that bilateral trade depends only on economic conditions in the two countries considered. In practice, however, bilateral trade will also depend upon competitiveness relative to other countries and markets. More generally, insofar as economic variables in third countries affect trade flows between other country pairs, gravity equations suffer from omitted-variables bias. Finally, the practice of pooling data for industrial and developing countries creates heterogeneity problem. While this maximizes degrees of freedom, the relationship between trade and economic characteristics may vary between the two groups of countries. The income elasticity of trade may be different at high and low levels of income or for different types of goods, for example. Transaction costs may have very different structures in countries with more and less articulated markets. Results based on heterogeneous cross sections may therefore suffer from subsample instability and heteroskedasticity (Bayomi and Eichengreen, 1995), which is partially alleviated using Eickert-White robust estimation.

4.2. Analysis of Empirical Results

A more systematic way of adjusting for the natural determinants of trade is by means of the gravity model. The assumptions of the model are that trade between two countries is proportionate to the product of their GNPs and the product of their per capita GNPs, an increasing function of adjacency (when two countries share a common land border), and inversely related to the distance between them. Dummy variables are added when both countries in a given pair belong to the same regional grouping. This provides a means of determining how much trade within

each region is due to factors common to trade throughout the world and how much remains to be explained by regional effects.

We have run gravity model estimations for the period 1980-2007 and the sub-periods 1980-89, 1990-99, and 2000-07. The results are reported in Tables 9 through 13. Table 9 presents descriptive statistics and correlation matrix of various explanatory variables used in the gravity model. We use regional block variables in our analysis in three ways. First, we use five regional blocks of countries, GCC, SAARC, AMU, ECO and D8, for these blocks represent a significant amount of trade among themselves. SAARC block consists of Bangladesh, India, Nepal and Bhutan, Pakistan, Sri Lanka and Maldives. GCC consists of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, UAE. AMU block consists of Algeria, Mauritania, Morocco, Tunisia, whereas ECO consists of Iran, Pakistan and Turkey. D8 block consists of Bangladesh, Pakistan, Malaysia, Indonesia, Egypt, Iran, Turkey and Nigeria. Second, we form hypothetical trading block GCCAMUECO among the member countries of GCC, AMU and ECO blocks to examine the likely effects of such grouping if they were to materialize. Third, we add a term for each grouping in order to capture trade-diversion effects. These terms are indicated by a suffix "N", standing for trade with non-members of the grouping in question.

The regression results for the period 1980-2007 are presented in Table 14. To check the robustness of our results, we perform three regression runs: first, with the existing and hypothesized trading block countries; second, with existing trading block countries; finally, with the hypothesized trading block countries. We have 56 countries in our data set, so that there are 1540 data points ($=56*55/2$) for a given year times 28 years, we should theoretically have 43,120 data points. However, due to unavailability of data the final sample size is 26,904.⁷ The dependent variable in all regressions is the value of trade (imports plus exports), in log form, between pairs of countries.

We find all three standard gravity variables (GDP, GDP per capita, distance and contiguity) to be highly significant statistically at the 1% level of significance. All variables have their expected signs. The positive sign for GDP per capita variable suggests that, as the GDP per capita of a country improves, it trades more with its block member.

⁷ If we had used OLS the total number of observations would be 16,598

The estimated coefficient on the log of the product of the two countries' GDPs at about 0.642 indicates that trade increases with size but less than proportionately. This reflects the fact that small countries tend to be more dependent on trade than larger, more diversified ones. The estimated coefficient on the product of per capita GDPs is about 0.06, indicating that poorer countries trade less with each other. The coefficient on the log of distance is -0.7 indicating that when distance between two nonadjacent countries is higher by 1%, trade between them falls by 0.7%. The coefficient on adjacency, at .93, indicates that two countries sharing a common border trade roughly 2.5 [$\exp(.93)$] times as much as two otherwise similar countries.

If there were nothing to the notion of trade blocs, these basic variables would soak up most of the variation in bilateral trade flows, leaving little to attribute to a dummy variable indicating whether two countries are members of the same regional grouping. Variations in intra-regional trade would be due solely to the proximity of countries and their rates of economic growth. The dummy variables for all set of preference variables are statistically significant. However, only SAARC, SAARCN and ECON, ECON are robust to model specification while GCC, AMU, GCCAMUECO are not robust to model specification (e.g. their coefficients change signs when considering model 2, 3, 4 and 5).

In model 1, SAARC, GCC, and D8 are positive whereas ECON and GCCAMUECO are statistically significant and negative. These results indicate that SAARC, GCC, and D8 are trade creating, but ECO and the hypothetical GCCAMUECO blocks would not create trade among themselves. In addition, SAARCN, GCCN, AMUN, and D8N have a positive and significant coefficient indicating that it does not divert trade from its low cost outside producers. However, the coefficient of ECON is negative and significant indicating that it reduces trade from low-cost outside producers.

Only the ECO block within the OIC member countries would not be trade creating for all model specifications. Also, D8 dummy variable is statistically significant in model 1, indicating the preferential trading agreements among these countries would yield trade creation benefits. Two countries in D8 block would trade 4.276 [$\exp(1.436)$] times more among themselves than two otherwise-similar country outside the block would. Also, the D8 is likely to trade with non-members.

To check whether the results hold for the sub-periods, we estimate the parameters of the model for 3 different decades: 1980s, 1990s and 2000s. Table 11 presents the results for the 2000s. Although, the hypothesized signs are the same, the magnitudes of the coefficients are higher, suggesting a stronger relationship between trade, country and partner size and per capita levels; also, countries are more inclined to trade with neighbor countries. Moreover, AMUN, GCCAMUECO still are not robust to model specification.

Table 12 shows that the model coefficients are statistical significant and with the expected signs. Moreover, the GCC coefficient for each model has statistical positive sign, suggesting that in the 1990s, GCC countries were more likely to trade among them. AMU's coefficients are negative in two of the models, meaning that member countries would not be trade creating. Also, the fictitious agreement GCCAMUECO would have been trade creating in the 1990.

Finally, Table 13 presents the results for the 1980s. Contrary to the 1990s and the 2000s, the per-capita income variables have negative signs. Richer countries were unlikely to trade among them. Also, similar to the results for the 1990s, GCC countries as well as the hypothetical GCCAMUECO were more likely to trade among themselves, whereas AMU members were not likely to trade among themselves.

From the regressions, it is not clear whether GCCAMUECO would benefit trade since we find conflicting signs when considering different models.⁸ However, the signs are consistent positive in models 5 and 6 in all period samples. If two countries are members of GCCAMUECO, they would trade more than 1.4 [$\exp(0.329)$] times as much as would two otherwise-similar countries, and trade more less with non-GCCAMUECO countries.

⁸ GCCAMUECO by construction tend to be collinear with GCC, AMU and ECO, which could explain the negative sign in model specification 1.

5. Recommendation and Policy Options for Establishing an Islamic Common Market (ICM)

5.1. Economic Cooperation and Regionalism

A regional economic integration will progress economic and social welfare if: (1) there is a broad scope for production specialization among countries within a bloc; (2) tariffs and non-tariff barriers to intra-trade are substantially reduced; (3) tariffs and non-tariff barriers with third countries are lower after the formation of trade agreements; (4) trading agreements should allow accession by any interested country, regardless of geographical location, in order to expand the scope of net welfare gains ; (5) trading agreements should support member countries to introduce and expand unilateral liberalization measures; and finally (6) trading agreements should not only restrict the use of unfair trade policies but should also minimize the protectionist effects of rules of origin, and archaic policies which undermine trade competition (Viner, 1950). Trade creation (TC) and trade diversion (TD) is a common feature of Preferential Trade Agreements (PTAs). TC occurs when preferential tariff cuts persuades a member nation to import goods from other member states instead of producing the goods itself. This is because decline in relative price of the imported goods through tariff removal. TD occurs when a partner country starts importing goods from member states rather than from non-partner countries, due to the fall in the price of the partner-sourced import good relative to the non- member-sourced import good. This is triggered by the preferential nature of the tariff cut. Since the PTA involves some trade liberalization, there is a potential welfare gain to the member country in the standard economic model of TC. However, the new distortion in the market arising from preferential or discriminatory nature of the tariff cut leads to a potential welfare loss resulting from TD. The potential net welfare effect is hazy and must be decided empirically, rather than theoretically.

Regional economic groupings may be classified into six major chronological groups:

1. Preferential trade areas in which member countries apply a preferential treatment by reducing customs tariffs for designated product categories from the member countries relative to all non-member countries. Higher tariffs would remain in place for all other non-designated product categories.

2. Free trade areas aim mainly to expand trade activities among themselves by eliminating customs tariffs on the products they produce themselves. They also design and develop complex rules of origin to prevent import products from third countries from penetrating into the grouping through the customs of the Member State with the lowest tariff and after which such goods may be re-exported to the other member states.

3. Customs unions seek to eliminate the deficiency of free trade area by not only abolishing/reducing tariffs among member states but by also setting a common external tariff policy against third parties. This guarantees the member countries free or privileged flow of tradable goods amongst themselves by forming a discriminatory trade bloc against the non-member countries. The main concern centers on co-ordination of the trade policies among the member countries and not development of elaborate rules of origin.

4. Common markets allow free flow of goods, services and factors of production among member states. It also establishes a common external tariff policy against third parties which militates the co-ordination of commercial and industrial policies. Citizens of a common market can work and invest in any member country without any restriction.

5. Monetary unions establish a central monetary authority to design, develop and coordinate the monetary policy for all member states and issue a common currency which circulates among the member countries.

6. Economic unions are characterized by free trade in goods and services, common external tariffs among members, free mobility of capital and labor harmonization of national economic policies to form a single economic unit. The European Union (EU) the best example whose integration efforts have been extended to harmonization of social policies.

5.2. The Economic Rationale for the ICM

The pitiable development and economic performance of most of the Islamic 57 national economies over prolonged period of time can be attributed to a number of factors including but not limited to incompatible economic policies of the Islamic countries' governments; overdependence on few primary products exports such as agricultural products, raw materials and fuel to generate foreign exchange to finance their development projects; low income elasticity of demand of primary products; incessant decline in world prices of primary products

relative to prices of manufactured goods; imposition of discriminatory policies of high tariffs, quotas and other non-tariff barriers by western countries on Islamic exports making Islamic countries disadvantaged in international trade and slowing their industrialization process; negative balance of trade where imports exceed exports; inelastic exports; exponential increase in foreign debts among Islamic countries; overvalued exchange rates; too small domestic markets coupled with few external outlets for the output of the Islamic countries' to realize the economies of scale and lastly, small volume of intra-Islamic trade.

Granted that international trade is overwhelmingly dominated inherently hostile western countries, ICM afford Muslim nations a unique and all-inclusive solution to aforementioned problems to vouchsafe realization of substantial gains from international trade and honorable survival in the global stage. The ICM can generate innumerable benefits to member countries. It has the potential to become the largest diversified economic bloc in contemporary world. Member nations would have the opportunity to exploit their Islamic cultural links to achieve socio-economic solidarity, generate massive aggregate demand and thereby economies of scale in production and self-sufficiency, reduced economic dependence on the non-Islamic countries for imports and exports, high positive flow of capital and improved foreign currency reserves, and enhanced bargaining power in international trade and financial markets. Islamic doctrines of honesty and economic justice should be the fulcrum around which sustainable economic growth and development and intra-Islamic trade revolve.

Like its predecessors (EU, NAFTA and APEC), ICM should not only focus on trade facilitation and liberalization but also on comparatively new and pressing topics of the multilateral negotiations within the framework of the WTO. Such topics hinges on trade in services, strengthening investment opportunities though active involvement of private sector, intellectual property rights, labor standards, protection of environment, technological standards, co-ordination of monetary, financial, fiscal and economic policies among others. This should put competition in areas of trade of goods and services a notch higher. The creation of ICM implies that members receive preferential access to each other's markets. Non-members must suffer relative erosion in market access. How such erosion would impinge on specific non-members depends upon a number of intricate factors. One important

modality in this direction has been the establishment of regional integration schemes.

5.3. Policy Suggestions

Insightful policies suggested have been hotly discussed as means of forming a successful and formidable OIC economic bloc. First, the volume of Intra-regional trade among OIC member states is fearfully low while dependence on the industrialized countries considerably high. Removal of tariff and non-tariff barriers under the OIC block countries can open up some profitable intra-regional trade channels. In the long run, structural change through regional planning can create new vertical and horizontal linkages and integration benefits.

Second, Ariff (1998) argues that to mitigate conflict between globalization and regionalism, a less powerful, outward looking, cost-effective, low-profile, informal arrangement such as Developing-8 (D-8) formation should be the starting point for OIC member countries. It is instructive that the member states of D-8 play only facilitation role by minimizing or removing existing disincentives such as bureaucratic controls while simultaneously offering additional fiscal and other incentives for intra-D8 investments. Intra-OIC trade can be created through intra-OIC private sector investment activities. Investments should open up new frontiers for two-way trade; importation of raw materials and intermediate inputs and exportation of final products. The major trading partners should also be the main sources of foreign direct investment.

Third, in addition to strengthening ECO arrangements, the OIC members should reinforce the backward and forward linkages in production and investment to spawn the economies of scale and increase the size of the domestic and regional markets to effectively stave off the competition and challenges posed by EC, NAFTA, and APEC. There is urgent need to diversify trade away from the big six OIC members (Saudi Arabia, Malaysia, Indonesia, UAE, Iran and Turkey) to economically strong (Brunei, Gabon, Libya, Kuwait and Qatar) and economically weak members to promote intra-OIC trade, coordinated development strategies, production and investment relationships and bigger flow of goods, capital to equalize rental on capital, labor to equalize the wage rate and technology to boost economically weak OIC

members. This is achievable if regional public-good type projects (transport and communication networks), mainly financed by the richer OIC countries are aggressively undertaken to strengthen the weak infrastructure linkages. Regional industrialization will become a reality when free movements of factors of production promote location and relocation of industries to take advantage of the availability of cheaper capital, labor and technology within the region (Naqvi, 1998).

Fourth, an elaborate regional development scheme is required for economically poor OIC member states, notably sub-Saharan countries. Resources from economically endowed OIC members in the form of grants, equity capital, and low-interest loans should flow to Sub-Saharan Africa to boost and insulate their economies and increase the size of the regional market though improved per capital income. This is consistent with the globalization of world trade based on non-discriminatory principles while entrenching geographically discriminatory trading arrangements in the name of an open world trading system. The oil-exporting countries should diversify their exports and manufacturing sector to produce high value added goods, such as biotechnology and computer software which have strong global demand (Naqvi, 1998, Hassan 1999).

Fifth, OIC countries should more fully adopt of the WTO framework to explore areas where greater export expansion is conceivable. E.g. The BRIC countries command a huge market and will surely drive future global trade and economies. Legal trade battles associated with anti-dumping actions, countervailing duties, an arbitrary use of safeguard clauses among by the developing countries can be settled through WTO. OIC can only excel if it works through and around the major trading blocs notably EU, NAFTA and APEC, (Together, they command 87% of the world trade). This can be achieved by utilizing already existing links between OIC and the three blocks. For example, Turkey, Egypt, Morocco have essential associations with EU, while Indonesia and Malaysia are linked to ASEAN and APEC. These OIC countries could then apply the MFN clause in dealing with their OIC members to facilitate the flow of the FDI and the transfer of technology to those OIC members EU, NAFTA and APEC members (Naqvi, 1998 and Hassan, 1999).

Sixth, increased development financial assistance and export credits among OIC countries is necessary to finance imports. If OIC countries were capable of internally generating foreign exchange, there would be no need to rely on developed countries to trade regionally using Dollars and other strong currencies. This problem can be solved through international convertibility of the currencies of the member countries and design of financial arrangements that facilitate greater trade and investment linkages which in due process will circumvent the need for convertible currencies. Three such financial arrangements are: (i) clearing union. An OIC Clearing House can be formed with the help of Islamic Development Bank (IDB). (ii) Export credit arrangement operate in such a way that the foreign exchange surplus of OIC member countries can provided as short-term export credits only allowing the exporters to obtain local currency payments while waiting for payment in convertible currency (IDB has begun this credit facility) . This type of arrangement is efficient if export proceeds are used to purchase goods from the importing country. Otherwise, the importer country will be in a vicious cycle of trying to obtain a convertible currency. (iii) Payments unions envisages establishment of fund to provide medium-term balance of payments credit to OIC member states. The final alternative is for the trade surplus countries to accept non-convertible currencies for payment by OIC member country.

Globalization has yielded significant benefits of astronomical development and growth especially from 1990s. However, tumult and volatility in global financial market, which has become increasingly integrated, bear the accompanying risks of destabilization effects and increased inequality between developed and developing countries. Developing countries face the double trouble of global economic meltdown and deepening socio-economic crisis due to gulf in international economic system. There is a need to monitor, regulate and manage globalization to attain the objective of growth coupled with equality. The Asian financial crisis of 1997 and the current global financial crisis of 2008 have markedly highlighted the inherent ineffective functioning of the global economic and financial system. There is a compelling and exigent need for concerted global effort to reform international financial institutions, systems and infrastructure to ensure greater transparency and disclosure and guard against possible systemic reappearance of such crisis and accompanying threats of instability and protectionism. At least historical and current experience

evince market instability and volatile financial flows are the hallmarks of a fragile global economy and dangers of unchecked globalization

Seven, to improve the liquidity, reduce transaction costs and improve pricing efficiency in OIC capital markets, regulatory agencies should focus on (a) the new issues market and related disclosure, accounting and listing standards; (b) secondary market trading activities, market surveillance and enforcement; (c) supervision of market practitioners through registration and prudential standards. Rules should be put in place to deal with insider trading, accounting and reporting standards, and simplified procedures for listing new firms. In an increasingly integrated global economy, an equitable global trading regime such as institutionalized WTO should design concrete measures to help and protect economically disadvantaged countries in the global marketplace. To better cope with challenges of globalized economy and open trading system, developing countries will need removal of tariff and non-tariff barriers imposed by developed countries, and sufficient financial resources to finance long-term investment and fund institutional capacity building.

Investment policies and incentives of the OIC countries should be country specific while FDI should rhyme with environmental, industrial and sector needs of each country and not geographical competitiveness. The quality rather than quantity should be encouraged. Investment incentives should be evolved within the overall industrial and development policy of the country. A vibrant and dynamic private sector inflow of FDI and reduction of foreign debt are all indispensable for sustained growth. To reap synergistic benefits from interdependence of government and private sector the governments ought to improve and expand social opportunities instituting appropriate measures in key economic sectors. The active involvement of private enterprise in trade and investment among the member countries of the D-8 should be strengthened. To accelerate regional private investment through interaction and cooperation within business community within D-8, there should be free movement of private investors, investment promotion agencies investment information network and synchronized meetings of proposed Business Forum among OIC member states to welcome and guide potential investors. The active involvement of private enterprise in trade and investment among the member countries of the D-8 should be strengthened. Moreover, initiatives of international

cooperation between developed and developing countries to forge a common front of trade facilitation and diversification to alleviate social and economic conditions of the people.

D-8 is a club with common platform of harnessing indigenous resources of the member states to improve the welfare of its people. Muslim countries can have a news agency to counter the heavily biased and distorted western media in dissemination of information. The D-8 member states have unifying front and bond of Islamic culture and heritage which could be utilized to promote long term economic liberation of their peoples. D-8 would foster economic co-operation, institutional and financial reforms, higher degree of transparency and prudence in the markets to moderate the painful effects of future global financial crisis.

An iterative and concrete policy implementation is a prerequisite for strong emergence of the nascent ICM. First, it is imperative to establish subgroups of OIC premised on geographical proximity, historical, cultural, and political experiences. Second, community-based organizations, NGOs and private sector forums should participate in OIC at grass root level to expand the scope of OIC and intensify its effectiveness. Third, it is imperative to increase the number of number of government-private sector interaction forums and conferences covering all bulwarks of economy. Fourth, economic cooperation, interdependence and policy co-ordination are necessary tools for better interaction and pivotal for consensus building on what is a relevant Islamic economic system in the face of present times and challenges. Fifth, establish a multi-faceted research body at OIC headquarters to steer coordinated and deliberate planning and policy making at governmental and non-governmental organizations level in OIC member countries. Research work could be shared and debated for implementation. Sixth, immediate steps be undertaken to establish a centralized OIC electronic media house to project OIC views on contemporary ideological, political, and economic issues in promoting global peace, progress, and prosperity for the humanity

At this budding stage OIC should project its efforts in project-oriented arrangements instead of structured, multi-faceted and resource consuming integration schemes of free trade areas, customs unions, and common markets. Second, member states participating in these new arrangements should have latitude in implementing liberalization

measures. Third, the arrangements should be aligned to bilateral and mutual opportunities available to member states. Fourth, these co-operation agreements may allocate resources to value-adding and high priority projects such as transport and communications networks, training, research, and technology. Fifth, all the barriers to trade may be eliminated to promote cross-boarder private investment and trade within OIC economic bloc.

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Table 1A : PTA and Regional Economic Groupings of the OIC Countries (cont.)

	A	U	C	C	E	E	I	M	W	A	C	G	A	B	C	E	E	S
	E	D	O	B	C	C	O	R	A	M	A	C	S	S	I	A	C	A
	C	E	M	I	C	O	C	U	E	U	E	C	E	E	S	E	O	A
	A	E		A	W			M	U		A	C		C		R		
	C	S		S	A			U			N						C	
		A			S													
Panel B: Middle East,																		
North Africa																		
Algeria	*									*								
Bahrain													*					
Egypt	*											*						
Iraq												*						
Jordan												*						
Kuwait												*	*					
Lebanon																		
Libyan A. Jamahiriya	*									*	*							
Morocco										*								
Oman													*					
Palestine												*						
Qatar														*				
Saudi Arabia														*				
Syria												*						
Tunisia	*									*								
United Arab Emirates												*	*					
Yemen												*						

Table 1A : PTA and Regional Economic Groupings of the OIC Countries (cont.)

A	U	C	C	E	E	I	M	W	A	C	G	A	B	C	E	E	S
E	D	O	B	C	C	O	R	A	M	A	C	S	S	I	A	C	A
C	E	M	I	C	O	C	U	E	U	E	C	E	E	S	E	O	A
	A	E		A	W			M		U		A	C		C		R
	C	S		S	A			U				N					C
		A			S												

Panel C: Asia and Europe

Albania													*				
Afghanistan																	*
Azerbaijan													*	*			*
Bangladesh																	*
Brunei												*			*		
Indonesia												*			*		
Iran																	*
Kazakhstan														*			*
Kyrgyz Rep.														*			*
Malaysia												*			*		
Maldives																	*
Pakistan																	* *
Tajikistan														*			*
Turkey												*					*
Turkmenistan														*			*
Uzbekistan														*			*

Source: "Regional Economic Groupings of the OIC Countries" Journal of Economic Cooperation, 21, 2 (2000), 67-114.

Notes:

AEC: African Economic Community.
 UDEAC: Central African Customs and Economic Union.
 COMESA: Common Market for Eastern and Southern Africa.
 CBI: Cross-Border Initiative.
 ECCAS: Economic Community of Central African States.
 ECOWAS: Economic Community of West African States.
 IOC: Indian Ocean Commission.
 MRU: Mano River Union.

WAEMU: West African Economic and Monetary Union.
 AMU: Arab Maghreb Union.
 CAEU: Council of Arab Economic Unity.
 GCC: Gulf Co-operation Council.
 ASEAN: Association of South East Asian Nations.
 BSEC: Black Sea Economic Co-operation.
 CIS: Commonwealth of Independent States.
 EAEC: East Asian Economic Caucus.
 ECO: Economic Co-operation Organisation.
 SAARC: South Asian Association for Regional Co-operation.

Table 1B: Major Regional Integration Schemes Comprising Only the OIC Countries

Name of the organisation	Number of members	Form of regional integration
Arab Maghreb Union (AMU)	5	Stage 1: Customs union. Stage 2: Common market.
Council of Arab Economic Unity (CAEU)	12	Stage 1: Customs union Stage 2: Common market.
Gulf Co-operation Council (GCC)	6	Stage 1: Customs union. Stage 2: Common market.
Economic Co-operation Organisation (ECO)	10	Preferential trade area.

Source: SESRTCIC, 2000

Table 1C: Major Regional Integration Schemes of OIC Member Countries with Other Countries

In Africa			
Name of the organisation	Number of members	Number of OIC members	Form of regional integration
African Economic Community (AEC)	52	25	Stage 1: Free trade area. Stage 2: Customs union. Stage 3: Common market. Stage 4: Economic and monetary union.
Central African Customs and Economic Union (UDEAC)	6	3	Stage 1: Customs union. Stage 2: Common market. Stage 3: Economic and monetary union.
Common Market for Eastern and Southern Africa (COMESA)	21	5	Stage 1: Customs union. Stage 2: Common market. Stage 3: Monetary union.
Cross-Border Initiative (CBI)	14	2	Free trade area.
Economic Community of Central African States (ECCAS)	11	3	Stage 1: Customs union. Stage 2: Common market.
Economic Community of West African States (ECOWAS)	15	12	Stage 1: Common market. Stage 2: Monetary union.
Indian Ocean Commission (IOC)	5	1	Preferential trade area.
Mano River Union (MRU)	3	2	Customs union.
West African Economic and Monetary Union (WAEMU)	7	6	Stage 1: Common market. Stage 2: Economic and monetary union.

Source: SESRTCIC, 2000

Table2. Gross Domestic Product

This Table presents average real gross domestic product in constant 2000 US dollars in different sub-periods. In Panel A, the real GDP for OIC countries is calculated as the sum of OIC members' real GDP with available data in the World Development Indicators (WDI) database. Moreover, the real GDP per capita for OIC members is calculated as the total real GDP for OIC members showed in panel A divided by total OIC population. Finally, panel C shows average GDP growth from the WDI database. OIC-LDC: OIC Least developed countries. OIC-MDC: OIC Middle Income Countries. OIC-FEC: OIC oil exporting members.

	1980-89	1990-99	2000-07	1980-2007
Panel A: Real GDP (2000 U.S \$ Billions)				
OIC-LDC	49.3	79.2	125.5	82
OIC-MDC	418.7	716.0	1,005.5	693
OIC-FEC	357.1	471.4	687.0	492
<i>OIC countries</i>	825.0	1,266.7	1,817.9	1,266
Low Income Countries	221.9	306.8	442.4	315
Middle Income Countries	3,292.6	4,564.8	6,825.5	4,756
High Income Countries	16,588.8	22,176.5	27,839.8	21,799
<i>World</i>	20,100.6	27,048.5	35,101.6	26,868
Panel B: Real GDP per capita (2000 U.S. \$)				
OIC-LDC	275	355	460	357
OIC-MDC	1,251	1,399	1,720	1,438
OIC-FEC	10,073	7,448	9,680	9,023
<i>OIC countries</i>	906	1,116	1,362	1,139
Low Income Countries	295	314	367	322
Middle Income Countries	1,045	1,234	1,656	1,287
High Income Countries	18,435	22,908	26,992	22,477
<i>World</i>	4,184	4,796	5,528	4,786
Panel C: GDP Growth (%)				
OIC-LDC	2.5	3.1	5.2	3.5
OIC-MDC	3.1	2.4	4.9	3.4
OIC-FEC	1.4	2.7	5.8	3.1
<i>OIC countries</i>	2.3	2.7	5.3	3.3
Low Income Countries	2.9	3.3	5.3	3.7
Middle Income Countries	3.4	3.5	6.0	4.2
High Income Countries	3.0	2.6	2.5	2.7
<i>World</i>	3.0	2.7	3.2	3.0

Table 3. Population

This Table shows population and its growth for OIC countries as well as world countries classified by income according World Bank classification. The data comes from WDI database. The figures are average during eighties, nineties and this decade. OIC-LDC: OIC Least developed countries. OIC-MDC: OIC Middle Income Countries. OIC-FEC: OIC oil exporting members.

	1980-89	1990-99	2000-07	1980-2007
Panel A. Growth rate (%)				
OIC-LDC	2.35	2.10	2.43	2.28
OIC-MDC	2.32	1.90	1.65	1.97
OIC-FEC	3.23	2.42	2.06	2.60
<i>OIC countries</i>	<i>2.52</i>	<i>2.07</i>	<i>1.94</i>	<i>2.19</i>
Low Income Countries	2.65	2.54	2.25	2.49
Middle Income Countries	1.79	1.42	1.06	1.44
High Income Countries	0.71	0.75	0.70	0.72
<i>World</i>	<i>1.72</i>	<i>1.49</i>	<i>1.23</i>	<i>1.49</i>
Panel B. Persons (millions)				
OIC-LDC	233	284	354	286
OIC-MDC	481	593	692	581
OIC-FEC	197	258	289	245
<i>OIC countries</i>	<i>911</i>	<i>1,135</i>	<i>1,335</i>	<i>1,112</i>
Low Income Countries	752	975	1,201	960
Middle Income Countries	3,144	3,690	4,111	3,615
High Income Countries	899	967	1,031	961
<i>World</i>	<i>4,794</i>	<i>5,631</i>	<i>6,343</i>	<i>5,535</i>

Table 4. Output Structure

This Table summarizes output structure: Agriculture and Industry, which is further divided by manufacturing and services. The figures are average of value added as percentage of GDP during different sub-periods for OIC as well as the world classified by income level according to the World Bank classification. The data comes from WDI database. OIC-LDC: OIC Least developed countries. OIC-MDC: OIC Middle Income Countries. OIC-FEC: OIC oil exporting members.

	1980-89	1990-99	2000-07	1980-07
Panel A: Agriculture				
OIC-LDC	38.1	34.5	31.1	35.1
OIC-MDC	21.6	22.8	17.4	21.0
OIC-FEC	6.1	9.3	9.4	8.1
<i>OIC average</i>	<i>25.1</i>	<i>24.4</i>	<i>21.0</i>	<i>19.0</i>
Low Income Countries	34.8	32.7	28.3	31.8
Middle Income Countries	19.0	13.8	10.2	14.8
High Income Countries	3.5	2.4	1.7	2.6
<i>World</i>	<i>6.0</i>	<i>4.5</i>	<i>3.4</i>	<i>4.8</i>
Panel B: Industry				
OIC-LDC	17.6	19.5	23.5	19.7
OIC-MDC	31.4	29.9	30.8	30.7
OIC-FEC	53.1	47.2	54.6	51.1
<i>OIC average</i>	<i>30.5</i>	<i>29.7</i>	<i>32.9</i>	<i>34.8</i>
Low Income Countries	22.2	23.1	26.6	24.0
Middle Income Countries	38.0	35.8	36.1	36.7
High Income Countries	34.9	29.9	26.5	30.9
<i>World</i>	<i>35.2</i>	<i>30.8</i>	<i>28.1</i>	<i>31.7</i>
Panel C: Manufacturing				
OIC-LDC	8.4	8.6	8.4	8.5
OIC-MDC	15.8	17.8	17.5	17.0
OIC-FEC	8.7	10.5	8.5	9.4
<i>OIC average</i>	<i>10.9</i>	<i>12.3</i>	<i>12.1</i>	<i>12.2</i>
Low Income Countries	14.5	13.3	13.1	13.5
Middle Income Countries	26.0	22.9	21.6	23.7
High Income Countries	NA	19.8	17.4	18.7
<i>World</i>	<i>NA</i>	<i>20.2</i>	<i>18.1</i>	<i>19.3</i>
Panel D. Services				
OIC-LDC	44.8	46.1	45.5	45.4
OIC-MDC	47.2	47.3	51.9	48.4
OIC-FEC	40.8	43.5	36.0	40.7
<i>OIC average</i>	<i>44.7</i>	<i>46.0</i>	<i>46.1</i>	<i>46.5</i>
Low Income Countries	43.0	44.3	45.0	44.2
Middle Income Countries	43.0	50.4	53.7	48.5
High Income Countries	61.7	67.8	71.8	66.6
<i>World</i>	<i>58.7</i>	<i>64.7</i>	<i>68.5</i>	<i>63.5</i>

Table 5. Inflation

This Table shows average inflation for different sub-periods. Panel A includes all country-years during the sub-periods whereas Panel B excludes country-year with inflation higher than 200 percent. Panel C shows world inflation classified by income according to the World Bank. The data comes from WDI database. OIC-LDC: OIC Least developed countries. OIC-MDC: OIC Middle Income Countries. OIC-FEC: OIC oil exporting members.

	1980-89	1990-99	2000-08	1980-07
<i>Panel A: Average Inflation</i>				
OIC-LDC	24.8	15.2	6.2	16.0
OIC-MDC	20.8	105.4	7.9	47.3
OIC-FEC	8.1	62.4	5.8	26.7
<i>OIC countries</i>	<i>19.7</i>	<i>61.9</i>	<i>6.8</i>	<i>31.0</i>
<i>Panel B: Average Inflation excluding periods of hyperinflation</i>				
OIC-LDC	23.3	15.2	5.8	15.4
OIC-MDC	14.2	20.1	7.6	14.4
OIC-FEC	8.1	10.6	5.3	8.2
<i>OIC countries</i>	<i>16.7</i>	<i>16.0</i>	<i>6.4</i>	<i>13.5</i>
<i>Panel C: world inflation</i>				
Low Income Countries	9.7	11.5	7.1	9.60
Middle Income Countries	8.9	10.8	5.4	8.58
High Income Countries	6.2	2.9	2.6	4.00
<i>World</i>	<i>7.7</i>	<i>7.0</i>	<i>4.6</i>	<i>6.55</i>

Table 6. Current Account and Reserves

This Table shows current account and reserves from BOP for OIC countries world countries classified by income according to the World Bank. Data comes from the WDI database. OIC-LDC: OIC Least developed countries. OIC-MDC: OIC Middle Income Countries. OIC-FEC: OIC oil exporting members.

	1980-89	1990-99	2000-07	1980-07
Panel A: Current account balance (constant 2000 US \$ billions)				
OIC-LDC	-4.6	-3.4	-3.8	-3.9
OIC-MDC	-16.2	-10.8	3.4	-8.7
OIC-FEC	13.4	-10.1	90.6	27.1
<i>OIC countries</i>	<i>-7.4</i>	<i>-24.2</i>	<i>90.2</i>	<i>14.5</i>
Low Income Countries	-13.8	-10.2	1.6	-8.1
Middle Income Countries	-62.1	-59.8	149.2	-0.9
High Income Countries	-61.2	-23.4	-199.3	-87.1
<i>World</i>	<i>-137.1</i>	<i>-93.4</i>	<i>-48.5</i>	<i>-96.2</i>
Panel B: Total reserves minus gold (constant 2000 US \$ billions)				
OIC-LDC	2.7	6.2	14.5	7.3
OIC-MDC	27.3	85.0	183.8	92.6
OIC-FEC	92.4	54.4	161.1	98.4
OIC countries	122.4	145.6	359.3	198.4
Low Income Countries	12.4	18.5	59.9	28.1
Middle Income Countries	132.3	420.4	1438.4	608.4
High Income Countries	335.5	1105.2	1761.2	1017.7
<i>World</i>	<i>731.7</i>	<i>1544.1</i>	<i>3259.5</i>	<i>1744.1</i>

Table 7. Total External Debt and Net Foreign Direct Investment

This Table shows total external debt for OIC countries and world countries classified by income according to the World Bank. Data comes from the WDI database. OIC-LDC: OIC Least developed countries. OIC-MDC: OIC Middle Income Countries. OIC-FEC: OIC oil exporting members.

	1980-89	1990-99	2000-07	1980-07
Panel A: Total external debt (constant 2000 US \$ billions)				
OIC-LDC	59.4	81.7	69.4	70.2
OIC-MDC	277.1	405.1	495.4	385.2
OIC-FEC	78.0	94.6	61.3	79.2
<i>OIC countries</i>	<i>414.6</i>	<i>581.4</i>	<i>626.1</i>	<i>534.6</i>
Low Income Countries	190.8	272.2	214.7	226.7
Middle Income Countries	1,215.2	1,738.0	2,140.9	1,666.4
High Income Countries				
<i>World</i>				
Panel B: Foreign Direct Investment (constant 2000 US \$ millions)				
OIC-LDC	76	665	2,928	1,101
OIC-MDC	4,509	11,040	20,708	11,470
OIC-FEC	4,077	3,104	94	2,591
<i>OIC countries</i>	<i>8,663</i>	<i>14,809</i>	<i>23,730</i>	<i>15,163</i>
Low Income Countries	1,082	2,758	4,936	2,782
Middle Income Countries	na	86,887	162,460	77,448
High Income Countries			-	
<i>World</i>	<i>na</i>	<i>-3,437</i>	<i>9,492</i>	<i>1,485</i>

Table 8. OIC Trade

This Table shows real merchandise import and export, trade in good and services and trade as percentage of GDP for OIC countries and world countries classified by income according to the World Bank. Data comes from the WDI database. OIC-LDC: OIC Least developed countries. OIC-MDC: OIC Middle Income Countries. OIC-FEC: OIC oil exporting members.

	1980-89	1990-99	2000-07	1980-07
Panel A: Merchandise Export (constant 2000 US \$ billions)				
OIC-LDC	9.8	11.5	24.9	14.7
OIC-MDC	104.5	182.7	318.0	193.4
OIC-FEC	272.8	189.8	431.8	288.6
<i>OIC countries</i>	<i>387.1</i>	<i>383.9</i>	<i>774.7</i>	<i>496.7</i>
Low Income Countries	64.8	66.6	124.5	82.5
Middle Income Countries	643.6	901.5	1,994.0	1,121.5
High Income Countries	2,879.3	4,313.2	6,055.1	4,298.8
<i>World</i>	<i>3,581.3</i>	<i>5,284.6</i>	<i>8,172.9</i>	<i>5,501.5</i>
Panel B: Merchandise Import (constant 2000 US \$ billions)				
OIC-LDC	22.0	20.0	34.9	25.0
OIC-MDC	127.4	210.2	334.9	216.2
OIC-FEC	175.4	134.2	225.0	174.9
<i>OIC countries</i>	<i>324.8</i>	<i>364.4</i>	<i>594.8</i>	<i>416.1</i>
Low Income Countries	84.1	79.0	133.3	96.3
Middle Income Countries	630.9	949.3	1,880.2	1,101.6
High Income Countries	3,003.4	4,356.2	6,360.3	4,445.7
<i>World</i>	<i>3,720.2</i>	<i>5,388.6</i>	<i>8,371.4</i>	<i>5,645.0</i>
Panel C: Net trade in goods and services (constant 2000 US \$ billions)				
OIC-LDC	-9.3	-8.5	-8.4	-8.7
OIC-MDC	-22.6	-10.0	9.7	-8.9
OIC-FEC	16.9	14.6	122.3	46.2
<i>OIC countries</i>	<i>-15.0</i>	<i>-3.9</i>	<i>123.6</i>	<i>28.5</i>
Panel D: Trade as GDP percent (%)				
OIC-LDC	40.9	43.4	52.2	45.0
OIC-MDC	56.9	70.9	73.6	66.7
OIC-FEC	76.7	76.8	82.5	78.4
Low Income Countries	36.4	43.0	54.1	43.8
Middle Income Countries	29.7	35.9	50.9	38.0
High Income Countries	32.8	33.8	42.6	35.9
<i>World</i>	<i>32.3</i>	<i>34.2</i>	<i>44.4</i>	<i>36.4</i>

Figure 1. Merchandise Export and Import change

This figure shows the percentage change in real merchandise export and import since 1980. OIC real export (import) is calculated by adding real export (import) of the OIC members. All countries' merchandise export (import) and import level as well as world merchandise export (import) level are from WDI database.

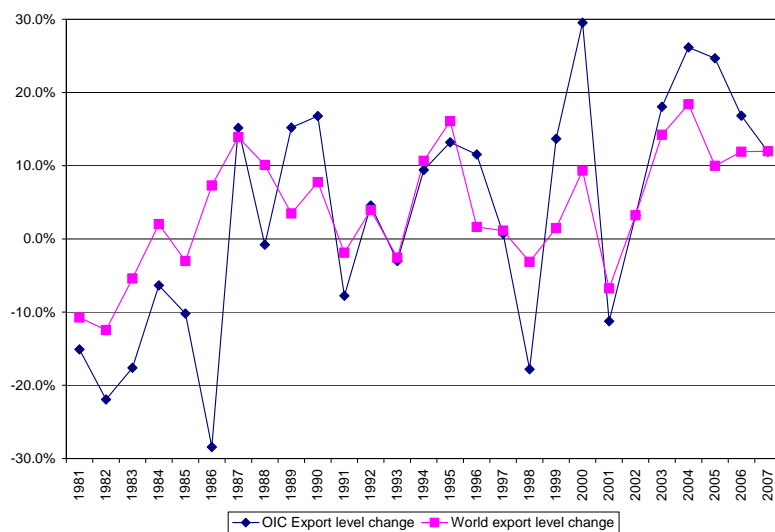
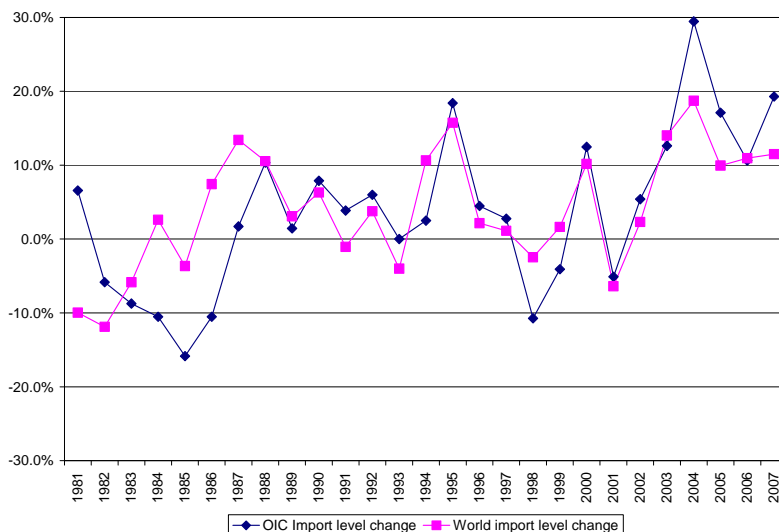
Panel A: real export change**Panel B: real import change**

Table 9. Descriptive statistics of variables used in gravitational model

The independent variable is trade between country *i* and partner *j*. GDP_{ij} : multiplication between country *i*'s real GDP with partner *j*'s real GDP. PCI_{ij} : multiplication between country *i*'s real GDP per capita with partner *j*'s real GDP per capital. Distance: distance between country *i* and partner *j*. BORDER: contiguous countries. SEA: country has sea shore. GCC: both country *i* and partner *j* belong to Gulf Cooperation Council. SAARC: both country *i* and partner *j* belong to South Asian Association for Regional Cooperation. AMU: both country *i* and partner *j* belong to Arab Maghreb Union. ECO: both country *i* and partner *j* belong to Economic Cooperation Organisation. D8: trade among eight bigger OIC members. GCCAMUECO: hypothetical trading block GCCAMUECO among the member countries of GCC, AMU and ECO blocks. Finally, variables with the suffix "N" stand for trade with non-members of the grouping in question.

Panel A: Descriptive Statistics (Number of observations: 26,094)

Variable	Mean	Standard deviation	Min	Max
Trade	0.046	0.247	0.00	10.27
Log(GDP_{ij})	4.164	2.481	-3.71	11.41
Log(PCI_{ij})	-0.004	1.950	-3.88	7.24
Log(Distance)	7.770	0.793	4.06	9.42
BORDER	0.060	0.237	0	1
SEA	0.799	0.401	0	1
SAARC	0.002	0.045	0	1
SAARCN	0.066	0.249	0	1
GCC	0.011	0.102	0	1
GCCN	0.078	0.269	0	1
AMU	0.006	0.080	0	1
AMUN	0.083	0.275	0	1
ECO	0.003	0.057	0	1
ECON	0.043	0.203	0	1
D8	0.030	0.171	0	1
D8N	0.165	0.371	0	1
GCCAMUECO	0.152	0.359	0	1
GCCAMUECON	0.231	0.421	0	1

Panel B: Correlation matrix

	Trade	Log(GDP _{ij})	Log(PCI _{ij})	Log(Distance)	BORDER	SEA	SAARC	SAARC _N	GCC	GCC _N	AMU	AMUN	ECO	ECON	D8	D8 _N	GCCAMUECO	GCCAMUECON
Trade	1.00																	
Log(GDP _{ij})	0.30	1.00																
Log(PCI _{ij})	0.21	0.50	1.00															
Log(Distance)	-0.16	0.07	0.07	1.00														
BORDER	0.16	-0.02	-0.09	-0.49	1.00													
SEA	0.07	0.18	0.37	0.04	-0.08	1.00												
SAARC	0.01	0.03	-0.02	-0.02	-0.01	-0.06	1.00											
SAARC _N	0.01	0.10	-0.12	0.15	-0.07	-0.30	-0.01	1.00										
GCC	0.24	0.11	0.27	-0.23	0.10	0.05	0.00	-0.03	1.00									
GCC _N	0.02	0.06	0.30	-0.02	-0.05	0.15	-0.01	-0.08	-0.03	1.00								
AMU	0.01	0.03	0.01	-0.10	0.15	0.04	0.00	-0.02	-0.01	-0.02	1.00							
AMUN	-0.02	0.12	0.03	0.01	-0.02	0.15	-0.01	-0.08	-0.03	-0.09	-0.02	1.00						
ECO	0.15	0.12	0.02	-0.04	0.15	0.03	0.00	0.06	-0.01	-0.02	0.00	-0.02	1.00					
ECON	0.09	0.19	0.02	-0.03	-0.04	0.11	-0.01	0.20	-0.02	-0.06	-0.02	-0.06	-0.01	1.00				
D8	0.17	0.31	-0.01	0.05	0.04	-0.02	0.13	0.13	-0.02	-0.05	-0.01	-0.05	0.32	0.02	1.00			
D8 _N	0.06	0.31	-0.05	0.16	-0.09	-0.02	0.01	0.42	-0.05	-0.13	-0.04	-0.13	-0.03	0.45	-0.08	1.00		
GCCAMUECO	0.28	0.48	0.33	-0.02	0.01	0.11	0.11	0.14	0.24	0.12	0.19	0.17	0.13	0.11	0.42	0.17	1.00	
GCCAMUECON	-0.06	0.11	-0.04	0.12	-0.07	0.10	-0.02	0.27	-0.06	0.33	-0.04	0.29	-0.03	0.22	-0.10	0.51	-0.23	1.00

Table 10. Regression results (period: 1980-2007)

This Table shows year-fixed effect regressions for different gravitational models⁹. The model is estimated using Poisson Pseudo maximum likelihood. The independent variable is trade between country *i* and partner *j*. GDP_{ij}: multiplication between country *i*'s real GDP with partner *j*'s real GDP. PCI_{ij}: multiplication between country *i*'s real GDP per capita with partner *j*'s real GDP per capita. Distance: distance between country *i* and partner *j*. BORDER: contiguous countries. SEA: country has sea shore. GCC: both country *i* and partner *j* belong to Gulf Cooperation Council. SAARC: both country *i* and partner *j* belong to South Asian Association for Regional Cooperation. AMU: both country *i* and partner *j* belong to Arab Maghreb Union. ECO: both country *i* and partner *j* belong to Economic Cooperation Organisation. D8: trade among eight bigger OIC members. GCCAMUECO: hypothetical trading block GCCAMUECO among the member countries of GCC, AMU and ECO blocks. Finally, variables with the suffix "N" stand for trade with non-members of the grouping in question.

Variables	1	2	3	4	5	6
Log(GDP _{ij})	0.642*** (35.86)	0.696*** (40.43)	0.742*** (51.62)	0.639*** (40.04)	0.649*** (36.94)	0.668*** (44.41)
Log(PCI _{ij})	0.058*** (3.07)	0.103*** (5.43)	0.080*** (4.63)	0.072*** (3.97)	0.087*** (5.37)	0.069*** (4.50)
Log(Distance)	-0.723*** (-21.36)	0.709*** (-20.50)	0.669*** (-17.89)	0.727*** (-21.24)	0.719*** (-19.68)	-0.730*** (-19.60)
BORDER	0.930*** (9.68)	0.866*** (9.16)	0.843*** (8.55)	0.909*** (9.69)	0.783*** (9.69)	0.693*** (8.50)
SEA	0.986*** (9.70)	0.878*** (8.21)	0.818*** (8.19)	0.945*** (9.59)	0.395*** (6.54)	0.372*** (6.11)
SAARC	0.810*** (5.17)	0.882*** (5.68)	0.916*** (6.30)	0.648*** (4.54)		
SAARCN	0.652*** (6.41)	0.666*** (6.15)	0.665*** (6.42)	0.630*** (6.35)		
GCC	1.320*** (3.84)	0.194 (1.64)	0.112 (0.95)	-0.265** (-1.97)		

⁹ To save space the year intercepts are not shown

Table 10. Regression results (period: 1980-2007) (cont.)

Variables	1	2	3	4	5	6
CCN	1.398*** (4.11)	0.110 (1.43)	-0.087 (-1.25)	-0.181** (-2.29)		
AMU	0.270 (0.79)	0.595*** (-6.38)	0.730*** (-7.59)	1.251*** (-11.00)		
AMUN	1.052*** (3.03)	-0.108 (-1.06)	0.338*** (-3.56)	0.500*** (-4.93)		
ECO	-0.615*** (-4.06)	-0.596 (-3.92)	0.496*** (-3.68)	0.689*** (-5.22)		
ECON	-0.232*** (-2.91)	-0.194 (-2.46)	-0.020 (-0.27)	-0.150* (-1.93)		
D8	1.436*** (4.02)	0.385 (3.10)			0.129 (1.44)	
D8N	1.647*** (4.81)	0.394 (5.41)			0.366*** (5.42)	
GCCAMUECO	-0.900*** (-2.70)			0.640*** (7.42)	0.278*** (4.05)	0.392*** (5.89)
GCCAMUECON	-1.588*** (-4.61)			0.024 (0.28)	0.300*** (-3.37)	-0.103 (-1.45)
# Observations	26,094	26,094	26,094	26,094	26,094	26,094
LOGL	-2,646.8	-2,663.9	-2,670.9	-2,649.7	-2,672.2	-2,682.3

Table 11. Regression results (period: 2000-2007)

This Table shows year-fixed effect regressions for different gravitational models. The model is estimated using Poisson Pseudo maximum likelihood. The independent variable is trade between country *i* and partner *j*. GDP_{ij}: multiplication between country *i*'s real GDP with partner *j*'s real GDP. PCI_{ij}: multiplication between country *i*'s real GDP per capita with partner *j*'s real GDP per capita. Distance: distance between country *i* and partner *j*. BORDER: contiguous countries. SEA: country has sea shore. GCC: both country *i* and partner *j* belong to Gulf Cooperation Council. SAARC: both country *i* and partner *j* belong to South Asian Association for Regional Cooperation. AMU: both country *i* and partner *j* belong to Arab Maghreb Union. ECO: both country *i* and partner *j* belong to Economic Cooperation Organisation. D8: trade among eight bigger OIC members. GCCAMUECO: hypothetical trading block GCCAMUECO among the member countries of GCC, AMU and ECO blocks. Finally, variables with the suffix "N" stand for trade with non-members of the grouping in question.

Variables	1	2	3	4	5	6
Log(GDP _{ij})	0.702*** (25.58)	0.754*** (29.27)	0.787*** (38.44)	0.698*** (28.51)	0.729*** (28.55)	0.746*** (34.39)
Log(PCI _{ij})	0.106*** (4.40)	0.140*** (5.73)	0.127*** (5.46)	0.122*** (5.14)	0.086*** (3.86)	0.072*** (3.22)
Log(Distance)	- (-13.00)	- (-12.48)	- (-11.17)	- (-12.97)	- (-12.05)	- (-11.76)
BORDER	1.150*** (8.87)	1.076*** (8.41)	1.072*** (8.10)	1.120*** (9.00)	0.930*** (7.97)	0.788*** (6.61)
SEA	0.942*** (6.27)	0.853*** (5.44)	0.804*** (5.41)	0.898*** (6.18)	0.387*** (4.26)	0.360*** (3.89)
SAARC	0.631*** (3.05)	0.678*** (3.33)	0.682*** (3.59)	0.451** (2.36)		
SAARCN	0.711*** (4.88)	0.726*** (4.75)	0.733*** (4.98)	0.689*** (4.84)		
GCC	0.741 (1.64)	-0.337* (-1.82)	-0.414** (-2.25)	0.730*** (-3.59)		

Table 11. Regression results (period: 2000-2007) (cont.)

Variables	1	2	3	4	5	6
GCCN	1.161*** (2.61)	-0.077 (-0.62)	-0.230** (-2.02)	-0.307** (-2.53)		
		-	-	-		
AMU	0.135 (0.31)	0.724*** (-5.75)	0.827*** (-6.50)	1.260*** (-8.40)		
				-		
AMUN	1.036** (2.31)	-0.100 (-0.69)	-0.269** (-1.99)	0.402*** (-2.78)		
	-	-	-	-		
ECO	0.844*** (-4.13)	0.818*** (-3.93)	0.784*** (-4.19)	0.926*** (-5.14)		
ECON	-0.184 (-1.63)	-0.146 (-1.30)	0.012 (0.12)	-0.093 (-0.85)		
D8	1.301*** (2.80)	0.250 (1.49)			0.089 (0.67)	
D8N	1.544*** (3.48)	0.326*** (3.12)			0.509*** (4.87)	
GCCAMUECO	-0.914** (-2.13)			0.509*** (4.25)	0.013 (0.12)	0.167* (1.75)
	-				-	
GCCAMUECON	1.477*** (-3.29)			0.032 (0.26)	0.449*** (-3.22)	-0.138 (-1.36)
# Observations	9,233	9,233	9,233	9,233	9,233	9,233
LOGL	-1,279.7	-1,286.8	-1,289.5	-1,281.8	-1,295.5	-1,307.4

Table 12. Regression results (period: 1990-1999)

This Table shows year-fixed effect regressions for different gravitational models. The model is estimated using Poisson Pseudo maximum likelihood. The independent variable is trade between country *i* and partner *j*. GDP_{ij}: multiplication between country *i*'s real GDP with partner *j*'s real GDP. PCI_{ij}: multiplication between country *i*'s real GDP per capita with partner *j*'s real GDP per capita. Distance: distance between country *i* and partner *j*. BORDER: contiguous countries. SEA: country has sea shore. GCC: both country *i* and partner *j* belong to Gulf Cooperation Council. SAARC: both country *i* and partner *j* belong to South Asian Association for Regional Cooperation. AMU: both country *i* and partner *j* belong to Arab Maghreb Union. ECO: both country *i* and partner *j* belong to Economic Cooperation Organisation. D8: trade among eight bigger OIC members. GCCAMUECO: hypothetical trading block GCCAMUECO among the member countries of GCC, AMU and ECO blocks. Finally, variables with the suffix "N" stand for trade with non-members of the grouping in question.

Variables	1	2	3	4	5	6
Log(GDP _{ij})	0.577*** (22.36)	0.645*** (24.85)	0.717*** (36.03)	0.578*** (25.44)	0.567*** (21.92)	0.588*** (28.57)
Log(PCI _{ij})	0.063** (1.99)	0.140*** (4.53)	0.096*** (3.50)	0.070** (2.35)	0.125*** (4.90)	0.105*** (4.52)
Log(Distance)	- (-16.20)	- (-15.41)	- (-13.06)	- (-16.17)	- (-14.77)	- (-14.88)
BORDER	0.833*** (6.36)	0.774*** (6.01)	0.738*** (5.41)	0.819*** (6.36)	0.686*** (5.97)	0.630*** (5.60)
SEA	0.986*** (6.91)	0.832*** (5.39)	0.748*** (5.24)	0.945*** (6.87)	0.389*** (4.35)	0.368*** (4.17)
SAARC	0.906*** (5.21)	1.070*** (5.89)	1.188*** (7.36)	0.775*** (4.85)		
SAARCN	0.533*** (4.00)	0.573*** (3.96)	0.556*** (4.04)	0.505*** (3.95)		
GCC	1.493*** (3.43)	0.565*** (3.59)	0.479*** (2.94)	-0.042 (-0.21)		

Table 12. Regression results (period: 1990-1999) (cont.)

Variables	1	2	3	4	5	6
GCCN	1.402*** (3.28)	0.269*** (2.81)	-0.008 (-0.09)	-0.132 (-1.12)		
			-	-		
AMU	0.342 (0.77)	-0.190 (-1.34)	0.395*** (-2.75)	1.157*** (-7.43)		
				-		
AMUN	0.946** (2.13)	0.023 (0.15)	-0.334** (-2.39)	0.572*** (-3.86)		
	-	-	-	-		
ECO	0.831*** (-5.11)	0.815*** (-5.06)	0.575*** (-3.81)	0.869*** (-6.03)		
ECON	-0.221* (-1.81)	-0.188 (-1.57)	0.015 (0.13)	-0.164 (-1.38)		
D8	1.457*** (3.19)	0.678*** (4.02)			0.148 (1.14)	
D8N	1.581*** (3.65)	0.517*** (5.08)			0.273*** (2.72)	
GCCAMUECO	-0.571 (-1.37)			0.938*** (8.24)	0.620*** (7.47)	0.707*** (8.66)
					-	
GCCAMUECON	-1.596 (-3.75)			-0.043 (-0.38)	0.277*** (-2.72)	-0.146* (-1.74)
# Observations	9,884	9,884	9,884	9,884	9,884	9,884
LOGL	-800.1	-809.5	-813.5	-800.6	-809.0	-810.4

Table 13. Regression results (period: 1980-1989)

This Table shows year-fixed effect regressions for different gravitational models. The model is estimated using Poisson Pseudo maximum likelihood. The independent variable is trade between country *i* and partner *j*. GDP_{ij}: multiplication between country *i*'s real GDP with partner *j*'s real GDP. PCI_{ij}: multiplication between country *i*'s real GDP per capita with partner *j*'s real GDP per capita. Distance: distance between country *i* and partner *j*. BORDER: contiguous countries. SEA: country has sea shore. GCC: both country *i* and partner *j* belong to Gulf Cooperation Council. SAARC: both country *i* and partner *j* belong to South Asian Association for Regional Cooperation. AMU: both country *i* and partner *j* belong to Arab Maghreb Union. ECO: both country *i* and partner *j* belong to Economic Cooperation Organisation. D8: trade among eight bigger OIC members. GCCAMUECO: hypothetical trading block GCCAMUECO among the member countries of GCC, AMU and ECO blocks. Finally, variables with the suffix "N" stand for trade with non-members of the grouping in question.

Variables	1	2	3	4	5	6
Log(GDP _{ij})	0.606*** (14.49)	0.641*** (15.36)	0.642*** (24.21)	0.582*** (15.37)	0.539*** (13.70)	0.554*** (14.65)
	-					
Log(PCI _{ij})	0.176*** (-3.04)	-0.130** (-2.35)	-0.122** (-2.56)	-0.131** (-2.42)	0.023 (0.60)	0.003 (0.08)
	-	-	-	-	-	-
Log(Distance)	0.940*** (-11.23)	0.928*** (-10.84)	0.918*** (-10.06)	0.940*** (-11.15)	0.978*** (-10.70)	0.971*** (-11.01)
BORDER	0.218 (1.03)	0.204 (0.96)	0.181 (0.90)	0.224 (1.08)	0.369** (2.02)	0.402** (2.27)
SEA	1.042*** (5.85)	0.938*** (5.35)	0.937*** (5.29)	1.045*** (5.70)	0.404*** (3.40)	0.392*** (3.27)
SAARC	0.942*** (4.11)	1.004*** (4.24)	0.930*** (4.12)	0.798*** (3.68)		
SAARCN	0.590*** (2.83)	0.593*** (2.79)	0.616*** (2.91)	0.627*** (2.99)		
GCC	0.942*** (3.52)	1.338*** (5.59)	1.235*** (5.12)	1.040*** (3.65)		

Table 13. Regression results (period: 1980-1989) (cont.)

Variables	1	2	3	4	5	6
GCCN	0.144 (0.72)	0.474*** (2.94)	0.369*** (2.88)	0.332** (2.15)		
	-	-	-	-		
AMU	1.461*** (-4.58)	0.824*** (-3.07)	0.885*** (-3.52)	1.190*** (-4.42)		
	-		-	-		
AMUN	0.827*** (-3.30)	-0.409* (-1.96)	0.502*** (-3.04)	0.570*** (-3.25)		
ECO	0.605** (2.15)	0.592** (2.12)	0.503* (1.90)	0.361 (1.35)		
ECON	-0.242 (-1.32)	-0.192 (-1.10)	-0.025 (-0.15)	-0.100 (-0.59)		
D8	-0.574* (-1.94)	-0.008 (-0.03)			0.211 (1.24)	
D8N	-0.061 (-0.31)	0.283 (1.63)			0.013 (0.10)	
GCCAMUECO	0.675*** (3.76)			0.416** (2.11)	0.564*** (3.56)	0.614*** (3.72)
GCCAMUECON				-0.122 (-0.58)	0.081 (0.44)	0.079 (0.42)
# Observations	6,977	6,977	6,977	6,977	6,977	6,977
LOGL	-531.7	-534.0	-534.6	-532.8	-546.0	-546.3