TRADE LINKAGES BETWEEN MALAYSIA AND THE OIC MEMBER COUNTRIES: AN EMPIRICAL ANALYSIS ON PATTERNS, DETERMINANT FACTORS, AND PROSPECTS

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ABSTRACT

International trade has always been playing a crucial role in the process of growth and development in Malaysia. This research attempts to analyze trade relations between Malaysia and The Organization of Islamic Cooperation (OIC) member countries for the period of 1997 to 2009. It is specifically aims to evaluate Malaysia-OIC trade pattern, identifies their determinants, and evaluate their future prospects. Towards these aims, the indirect quantitative analysis method and the panel data analysis using the gravity model of trade, exports, and imports are employed. The analysis of trade pattern reveals that the OIC countries have not used all their potential and resources available to establish a strong and effective intra-OIC trade. The gravity model estimates imply, among others, the importance of size effects, level of development, level of openness, and the FDI inflows in determining trade flows between Malaysia and the OIC member countries. The major determinants of Malaysia's exports to OIC are the size of the economies, level of openness of the economy, inflation rates, and the exchange rates. On the other hand, distance factor is not significantly influence Malaysia's imports whereas institutions is empirically proven to be a major determinant for the Malaysia-OIC of trade, exports, and imports. Findings from the aforementioned analyses are then to be constructed by employing the SWOT analysis to investigate future prospects of trade relationship between Malaysia and the OIC member countries. Based on the findings, some policy issues are highlighted and policy recommendations are developed, such as on fostering greater engagement with the OIC member countries in the African region, accelerating the effort to establish the Islamic Common Market (ICM), liberalizing the economy further, improving strategic sectors such as the Islamic Banking and Finance, and intensifying endeavors in curbing corrupt practices.

Keywords: International Trade, Gravity Model, Panel Data, Malaysia's Trade

ABSTRAK

Perdagangan antarabangsa telah memainkan peranan yang penting dalam proses pertumbuhan dan pembangunan di Malaysia. Kajian ini bertujuan untuk menganalisis hubungan perdagangan di antara Malaysia dengan negara-negara Pertubuhan Kerjasama Islam (OIC) bagi tempoh 1997 hingga 2009. Secara khususnya, kajian ini cuba untuk menilai corak perdagangan Malaysia-OIC, faktor-faktor penentunya, dan menilai prospek masa hadapan perdagangan Malaysia dengan Negara OIC. Metodologi yang digunakan adalah analisis kuantitatif tidak langsung dan analisis data panel bagi model graviti perdagangan, eksport, dan import. Analisis corak perdagangan menunjukkan bahawa negara-negara OIC tidak menggunakan sepenuhnya potensi dan sumber yang ada untuk mewujudkan perdagangan intra-OIC yang lebih kukuh dan efektif. Anggaran daripada model graviti mendapati bahawa antara faktor penentu kepada aliran perdagangan Malaysia-OIC antaranya ialah kesan saiz, tahap pembangunan, tahap keterbukaan, dan kemasukan FDI. Penentu utama bagi eksport Malaysia ke OIC pula ialah saiz ekonomi, tahap keterbukaan ekonomi, kadar inflasi, dan kadar matawang. Dalam pada itu, faktor jarak adalah tidak signifikan dalam mempengaruhi import Malaysia manakala institusi pula adalah faktor penentu utama kepada perdagangan, eksport, dan import Malaysia-OIC yang telah dibuktikan secara empirikal. Hasil dapatan daripada analisis-analisis ini digunakan untuk menganalisis prospek hubungan perdagangan di antara Malaysia dengan negara-negara OIC melalui analisis SWOT. Berdasarkan kepada dapatan kajian, beberapa isu polisi diketengahkan dan beberapa cadangan polisi dibentuk, antaranya ialah perlunya meningkatkan hubungan dengan Negara OIC di benua Afrika, meningkatkan usaha untuk mempercepatkan penubuhan pasaran Islam bersama (ICM), meliberalisasikan ekonomi dengan lebih lanjut, memfokuskan kepada sektor-sektor strategik seperti perbankan dan kewangan Islam, dan mempergiatkan lagi usaha untuk membenteras gejala rasuah.

Katakunci: Perdagangan Antarabangsa, Model Graviti, Data Panel, Perdagangan Malaysia

ACKNOWLEDGEMENT

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LIST OF ABBREVIATIONS

AFTA – ASEAN Free Trade Area

APEC – Asia-Pacific Economic Cooperation

ASEAN – Association of Southeast Asian Nations

BNM – Bank Negara Malaysia

BO – Business Opportunities

CARSICM – Center of Advanced Research & Studies of the Islamic Common

       Market

CIA – Central Intelligence Agency

COMCEC – Standing Committee for Economic and Commercial Cooperation of

       The Organization of Islamic Cooperation

CM – Common Market

CU – Custom Union

DOTS – Direction of Trade Statistics

EMU – Economic Monetary Union

EPP – Entry Point Projects

ETP – Economic Transformation Programme

EU – European Union

FDI – Foreign Direct Investment

FTA – Free Trade Agreement

GCC – Gulf Cooperation Council

GTP – Government Transformation Programme

ICM – Islamic Common Market

IDB – Islamic Development Bank

IMD – Institute for Management Development

IMF – International Monetary Fund

KPI – Key Performance Indicators

LAS – League of the Arab States

LDC – Least Developed Country

MENA – Middle East and North Africa

MI – Middle-Income

MITI – Ministry of International Trade and Industry

NAFTA – North American Free Trade Agreement

NEM – New Economic Model

NKEA – National Key Economic Area

NKRA – National Key Result Area

NTP – National Transformation Policy

NVP – National Vision Policy

OE – Oil-Exporting

OIC – Organization of Islamic Cooperation

OPEC – Organization of Petroleum Exporting Countries

PPP – Public-Private Partnership

PTA – Preferential Trade Agreement

SESRTCIC – Statistical, Economic, and Social Research and Training Centre

For Islamic Countries

SME – Small Medium Enterprise

SRI – Strategic Reform Initiative

TC – Transition Countries

TPS-OIC – Trade Preferential System – Organization of Islamic Cooperation

UAE – United Arab Emirates

UDEAC – Central African Customs and Economic Union

UN – United Nations

UN COMTRADE – United Nations Commodity Trade Statistics Database

WDI – World Development Indicators

WIEF – World Islamic Economic Forum

WTO – World Trade Organization

10MP – 10th Malaysia Plan

CHAPTER ONE

INTRODUCTION

1.1   Background

International trade has always been playing a crucial role in the process of growth and development in Malaysia, especially in transforming the economy from a low income to upper-middle income category. In 1992, Malaysia has achieved an upper-middle income status from low income economy. The significant role which trade has played in transforming the Malaysian economy can be seen primarily in the ratio of exports to gross national product (GNP) from 1965 to 1996, where it has increased from 48.2 per cent to 100.3 per cent (Ariff, 1998).

Low income country, according to the World Bank's definition, is a country of having a per capita gross national income (GNI) in the year 2005 of USD875 or less; while upper-middle income country is between USD3,466 and USD10,725 (Todaro and Smith, 2009). In line with the 1993 System of National Accounts (SNA), the World Bank has replaced the gross national product (GNP) terminology or concept into the new one called gross national income (GNI). GNI is defined as the total output of both domestic and foreign claimed by residents of

a country (Todaro and Smith, 2009). It comprises gross domestic product (GDP) plus income received from other countries, primarily on interest and dividends.

The position of the Malaysian economy in the context of international trade is quite impressive where it is among the top 20 major trading nations in the world and also an active member of the World Trade Organization (WTO). Traditionally, Malaysia's major trading partners were the United States of America, the European Union (EU), and Japan. But of late, this trend has been shifted somewhat primarily due to the 2008/09 world economic and financial crisis. In 2009 for example, Malaysia's major exporting and importing nations have tilted more towards other new markets and non-traditional countries such as China (MITI, 2010). This crisis can be seen as one of the example of the growing challenges and threats emanating from the increasingly globalizes economy. As such, it seems that while globalization is an inevitable phenomenon, it is important that the adverse effects of it can be minimized through appropriate policy responses. Furthermore, in the aftermath of the September 11, 2001 terrorist attack that hit the World Trade Center in New York City and the Pentagon in Arlington, Virginia where both in the United States of America (September 11 terrorist attack), it is high time for the Muslim countries to foster greater economic cooperation among themselves to increase their role in the international front so that they are not becoming an easy target of criticism especially by the western countries and eventually can optimize their economic potentials.

One of the crucial policy responses to these challenges is through the process of regionalization. Balassa (1961) introduced the concept of economic integration in international trade, which is also known as regionalism. It shows the negative correlation between economic integration and barriers to trade. There are five forms of regionalism. They are as follows:-

1) Preferential Trade Agreement (PTA)

2) Free Trade Area (FTA)

3) Customs Union (CU)

4) Common Market (CM)

5) Economic and Monetary Union (EMU)

Out of these five, Preferential Trade Agreement (PTA) is the weakest form of economic integration or regional integration. Under PTA, tariffs imposed to each others' goods are lesser than the tariffs set on the same products coming from countries elsewhere (Krugman and Obstfeld, 2009). Although it allows for tariff reductions, but the reduction is not in totality. Free Trade Area (FTA), on the other hand, allows the shipping of each country's goods to the other without tariffs and be able to set tariffs with other countries independently (Krugman and Obstfeld, 2009). The third form of regionalism is a Custom Union (CU), where member countries are in agreement on tariff rates (Krugman and Obstfeld, 2009). Together with Common Market (CM), they involve the elimination of all forms of barriers and free movement of factors of production.

Economic and Monetary Union (EMU), on the other hand, is the strongest type of regionalism. EMU, where the establishment is only possible after the formation of the Common Market (CM), it permits for the use of common currency among its member countries. While theoretically, the effect of regionalism on world trade liberalization is still debatable, that is, whether it will impede or promote it, empirical observations have clearly shown that the world has becoming increasingly regionalized.

The mushrooming of the creation of the regional economic blocs, such as The European Union (EU), the Organization of Islamic Cooperation (OIC), the North American Free Trade Agreement (NAFTA), the Asia-Pacific Economic Co-operation (APEC), the Association of South East Asian Nations (ASEAN), the Central African Customs and Economic Union (UDEAC), just to name a few, have shown the growing significance of regionalism in the world economic affairs. However, it is important to note that some of these regional blocs, such as OIC and ASEAN were initially formed primarily to achieve political purposes rather than economic goals. ASEAN for example, which is established in 1967, is concerned primarily on issues of political security in Southeast Asia before efforts on economic advancement under ASEAN was rigorously pursued beginning in the early 1970's and subsequently leads to the establishment of ASEAN Free Trade Area (AFTA) in 1992. AFTA, among others, is an attempt to further liberalize trade activities among its member countries.

Similarly, OIC, or the Organization of Islamic Cooperation (OIC), which is established on 12 Rajab 1389H (25 September 1969) in Rabat, Kingdom of Morocco, was meant for a struggle for the Palestinians to gain their sovereignty rights as a legitimate nation and eventually aspired to establish Jerusalem as the capital city of the Palestine (al-Ahsan, 1993). The OIC was formerly known as the Organization of the Islamic Conference (OIC) before it changed to its current name on 28 June 2011. In 1972, economic cooperation among the OIC countries has become an important agenda where it is manifested by the approval of the Charter of the OIC (Amin and Hamid, 2009). Although the purpose of the formation of OIC was initially in response to the attack on the al-Aqsa Mosque in Jerusalem by the Jews, the need to cooperate on the economic arena among member countries has gain its momentum in the 1974, beginning at the second Islamic Summit Conference, and subsequently with the adoption of the General Agreement for Economic, Technical and Commercial Co-operation among the member states of the OIC countries.

The OIC member countries, which is now has 57 member countries and 13 observer status countries, are heterogeneous in nature. They are spread all over the four continents, practicing different economic and political systems, have a different levels of development, thus making it hard to categorize the OIC as a "regional grouping." Generally, the term "region" can be defined differently depending on the discipline it is used. It is a concept being applied by many other

disciplines other than economics in social sciences. Practically, it is like a chameleon, where the meaning is taken on the context of its use (Blair, 1991).

Specifically, there are three types of regions, namely homogeneous region, functional region, and administrative region (Blair, 1991). For the type of homogeneous region, it is categorized on the basis of internal similarity, whereas functional region, as the name implies, is distinguished by the functions and the extent of the component in the region interact. Administrative region, on the other hand, is defined in a broader scope where it may not be distinct from both homogeneous and functional region. One of the main reasons for the formation of the administrative region is for organizational purpose and thus, the OIC group can be seen as a form of administrative region.

But a "region", broadly speaking, can be defined as a group of countries that are based on some common criterion, and in this perspective, it can be argued that the common criterion would be the religion of Islam (Ariff, 1998). It is this definition of region being used in the context of this study. Against such a backdrop, this research is an attempt to analyze the bilateral trade relationship between Malaysia and the Organization of the Islamic Cooperation (OIC) member countries. In this research, the Muslim country is defined as the OIC member countries comprising of 57 independent Muslim states. Hence, the term "Muslim" and "OIC" are used interchangeably.

Furthermore, in this research, trade is defined as the sum of Malaysia's imports from and exports to OIC member countries. As this research is about trade flows between countries (Malaysia and the OIC member countries), the need to differentiate between trade in goods and trade in services is seen as unnecessary (Lee and Llyod, 2002). This is because in principle, any theories of international trade should cover both trade in goods as well as in services (Kimura and Lee, 2004). Therefore, in this research, data on merchandise trade are employed to estimate the gravity equations and is used to give insights on analyzing Malaysia-OIC trade in services.

The prospects and opportunities in forging a closer and deeper regional economic co-operation under OIC, particularly with the rich Arab countries are yet to be fully tapped especially through the means of trade (Khadijah, 2004). Furthermore, the 2008/09 world economic and financial crisis and in the aftermath of the September 11 terrorist attack have made the trade relationship between Malaysia and the OIC countries becoming more relevant than ever. Since the establishment of OIC in 1969, there have been many initiatives among the member countries in promoting economic and trade cooperation under the OIC framework (Suayb, 2009). The implementation of the Trade Preferential System among OIC member countries (TPS-OIC) as a means of establishing the Islamic Common Market (ICM), the establishment of the Islamic Development Bank (IDB), the existence of seminars and forums such as the World Islamic Economic Forum (WIEF), and the resolutions of the Makkah summit in 2005 (which is to increase intra-OIC

trade in ten years time to 20 per cent of global trade by the year 2015) are some examples of programmes, policies, and initiatives that are specifically meant to promote, enhance, and strengthen intra-OIC trade.

Despite all these, it is still being argued that as a whole, the OIC countries are still trade more with the rest of the world than among themselves (Hassan, 1998). This is in line with the recent empirical facts available. In 2006 for instance, the share of intra-OIC trade has dropped to 14.3 per cent from 14.8 per cent in the previous year (Carsicm, 2008).

The recent patterns of trade among the OIC member countries (intra-OIC trade) can be seen in Figure 1-1.
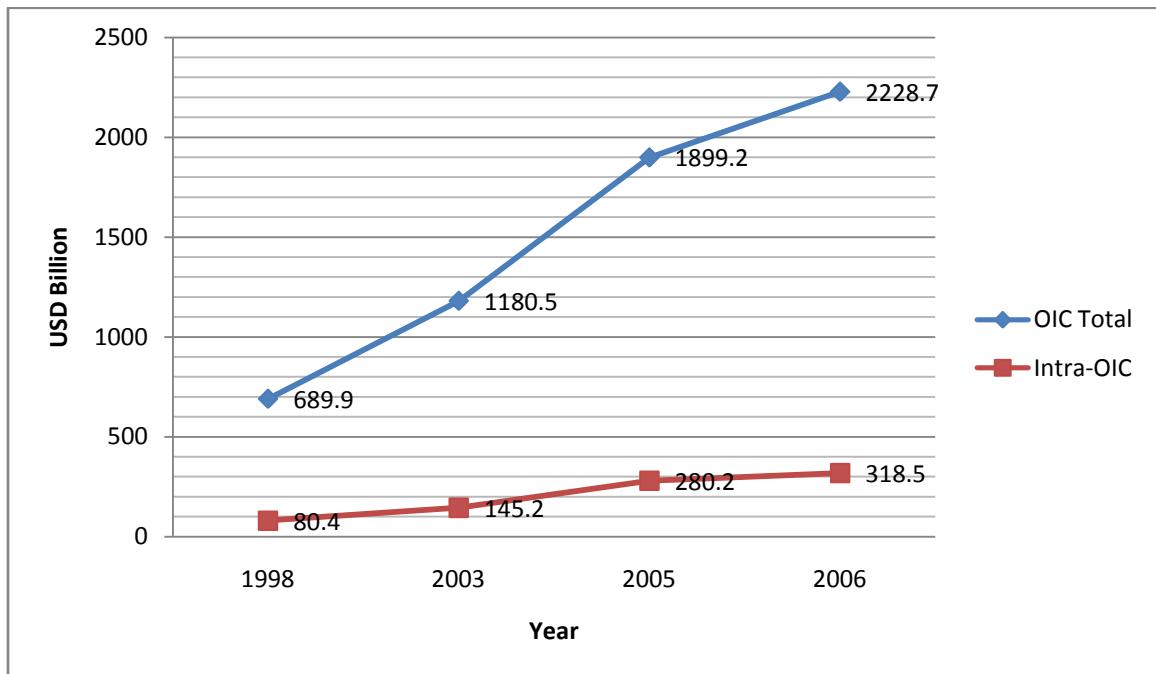
Figure 1-1
Intra-OIC Trade for the Year 1998, 2003, 2005, and 2006

Source: http://www.carsicm.ir/icmroot/public/Statistics/OIC-View.htm based on data from the IMF, Direction of Trade Statistics, Jun 2007. Retrieved on 29 September 2010.

Figure 1 shows that the total international trade of OIC member countries has far outpaced the amount of intra-OIC trade. In 2006 for example, intra-OIC trade amounted to only USD318.5 billion worth compared to USD2,228.7 billion for OIC total trade. The amount of total trade with non-OIC member countries has increased in 2006 from 1998. In 1998, the amount was USD609.5 billion while in 2006, the amount increased to USD1,910.2 billion.

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While there is nothing wrong for the Muslim countries to engage in trade activities with non-OIC countries, it is important that they are not overly dependent on them. Moreover, the OIC member countries need to realize the vast economic potential that exists among them, so that they can work together to enhance their economic cooperation and utilizing their economic activities especially through trade and investment, thereby strengthening the OIC and the *Ummah* as a whole. This is crucial especially in the context of the post-September 11 terrorist attack era and the on-going world economic and financial crisis. It is crucial for them to unlock their economic potential through regional economic cooperation under OIC and less relying on the western economies especially on trade and investment activities. This is where Malaysia, as one of the OIC member country, can play an important and leading role to foster greater trade relationship with the OIC member countries.

With relative political stability, robust financial regulation, sound regulated capital markets, and an educated workforce, Malaysia certainly has a comparative advantage vis-à-vis the other OIC member countries to become a key driver in increasing intra-OIC trade and investment. Moreover, Malaysia has established itself as a hub of islamic finance, islamic capital market, halal industry, clean energy, and education which will give an extra boost for Malaysia to play a leadership role. The improvement in Malaysia's international competitiveness ranking accorded by the Switzerland-based Institute for Management Development (IMD) proves Malaysia's ability to lead where Malaysia ranked 10th

in the 2010 ranking, which is the only OIC country made up of top 10 in the ranking.

It is also important to note that Malaysia was the chairman of the OIC for five years from 2003 until 2008 and handed over the chairmanship to the Republic of Senegal at the 11th Islamic Summit Conference in Dakar on 13 – 14 March 2008. The impressive economic development track record for the Malaysian economy in the last three decades certainly has a lot to offer for OIC member countries to draw a number of policy lessons (Ariff, 1998). In light with the 2008/09 world economic and financial crisis, it is vital for Malaysia to find a new market to diversify its trade and investment activities to generate a new source of income as the conventional markets, such as the U.S., EU, and Japan are still not fully recovered from the crisis. These economies are still grappling with economic problems in their respective countries such as stagnation in growth, high unemployment rate, sovereign debt crisis, and high debt and deficit levels. As of 2010, Malaysia's GNI per capita is around USD7,000 and Malaysia aspires to become a high-income economy by the year 2020 of which, under World Bank's definition, as having GNI per capita of at least USD15,000.

1.1.1   The Malaysian Economy: Moving Towards a High-Income Category

The effort to transform the Malaysian economy from upper-middle income to a high-income economy in response to the 2008/09 world economic and financial crisis began when Datuk Seri Mohd Najib Tun Abdul Razak, the sixth Prime Minister of Malaysia, introduced the concept of 1Malaysia with a theme "People First, Performance Now". This concept, which is based on eight core values such as meritocracy and integrity, would have an economic dimension of pursuing more equitable allocation of resources for all Malaysians (Gomez, 2010). The Malaysian government then launched the Government Transformation Programme (GTP), which outlined the six National Key Result Areas (NKRAs) and the ministerial key performance indicators (KPIs) in an attempt to achieve two objectives, that is, to reform the government delivery services to be more accountable and efficient and to bring Malaysian forward as an advanced, united, just society, and high standard of living (GTP, 2010). The six NKRAs that is based on the 1Malaysia principle are fighting corruption, combating crime, improving education, upgrading public transport in urban areas, upgrading rural basic infrastructure, and reducing the incidence of poverty.

The endeavor of transforming the Malaysian economy has been pushed further by the announcement of the first part of the New Economic Model (NEM), with the aim of moving the economy out of the "middle-income trap" by the setting of the goals of achieving high-income, inclusiveness, and sustainability. It is based on eight strategic reform initiatives (SRIs) such as putting the private sector as an

engine of growth, improving the quality of the labor force, and looking for a new source of growth (NEM, 2010).

On June 10, 2010, as part of Malaysia's five-year economic blueprint, the 10th Malaysia Plan (10MP) has been launched which covers over the year from 2011 till 2015. It incorporates both the Government Transformation Programme (GTP) and the New Economic Model (NEM) 'way of thinking'. The 10MP allocated RM230 billion ringgit for development programmes to achieve, among others, 6 per cent growth per annum, GNI per capita to USD12,140 in 2015 from USD6,700, and 12.8 per cent of private investment (Jabatan Perangkaan Malaysia, 2010). To achieve this end, 12 National Key Economic Areas (NKEAs) has been recognized involving 11 sectors such as oil and gas, education, and services, and development in Kuala Lumpur (Jabatan Perangkaan Malaysia, 2010). In addition to that, 52 high-impact projects worth RM63 billion are being identified as part of the public-private partnership (PPP) which includes projects such as developments of highways, coal plants, redevelopment of the Sungai Besi Airport, and construction of a liquefied natural gas plant (Jabatan Perangkaan Malaysia, 2010).

In an effort to detail out specific programmes under the 12 NKEAs and the NEM, the government unveiled the Economic Transformation Programme (ETP); thus setting a road map for Malaysia to become a high income and developed country in 2020. The ETP outlined USD138 billion for 131 Entry Point Projects (EPP),

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USD112 billion for 60 Business Opportunities (BO), and USD86 billion for Growth in other sectors to achieve the target of GNI per capita USD15,000 by the year 2020 (ETP, 2010). The strategies and programmes then have been further detailed under the 2011 budget, which is the yearly and short term Malaysian economic plan. In it, RM1.3 trillion has been allocated for various investment programmes in 12 NKEAs and specific mega projects have been identified to spur growth, such as the RM5 billion for Warisan Merdeka Tower and RM10 billion for development in Sungai Buloh.

On December 3, 2010, the second part or the final part of the New Economic Model (NEM) was unveiled. Four key thrust have been identified to transform Malaysia to become a high income and developed nation by the year 2020. These are continuing and managing the liberalization programmes, improving the labor market, undergoing bureaucratic reforms, and addressing the issue of social cohesion. In finalizing the transformation agenda, the government has introduced six strategic reform initiatives (SRIs) with a specific goal of enhancing the country's level of competitiveness. These initiatives are seen as enablers in achieving the objectives of the NEM. The six SRIs are public finance reform, government's role in business, human capital development, public service delivery, international standards and liberalization, and bumiputera small and medium enterprises (SMEs). The SRIs comprises of 51 policy measures, where 37 of which have been put under the six SRIs whereas another 14 policy measures have been placed under the 12 NKEAs.

On October 2011, the government announced the 2012 budget, where it provides measures to manage the soaring cost of living, the fiscal deficit, and the uncertainties of the global economy. In the budget, the economy is projected to grow at 5 per cent to 5.5 per cent in 2011 and 5 per cent to 6 per cent in 2012. With the theme of "National transformation policy: welfare for the rakyat, well-being of the nation", this budget is crafted under the long term development plan of the National Transformation Policy (NTP), which spans from 2011 until 2020. The NTP will supersede the National Vision Policy (NVP), which began in 2001 and ended in 2010. Certainly, most of the measures in the budget have synchronized the other reform initiatives laid down by the government such as the Government Transformation Programme (GTP), the New Economic Model (NEM), the Economic Transformation Programme (ETP), the 10th Malaysia Plan (10MP), and the six Strategic Reform Initiatives (SRIs) of which, the definitive goal is to transform the country to become a developed and high-income country by the year 2020.

1.1.2 An Overview of Malaysia-OIC Trade Relationship

Over the recent years, Malaysia-OIC trade relationship is relatively small compared with Malaysia's trade with the rest of the world although it has shown an increasing pattern (Figure 1-2). In 2007 for example, Malaysia's total trade with the OIC member countries accounted only 8.37 per cent of its total global trade (IMF and Dinar Standard, 2008).

The overview of trade relationship between Malaysia and the OIC member countries can be observed in Figure 1-2.
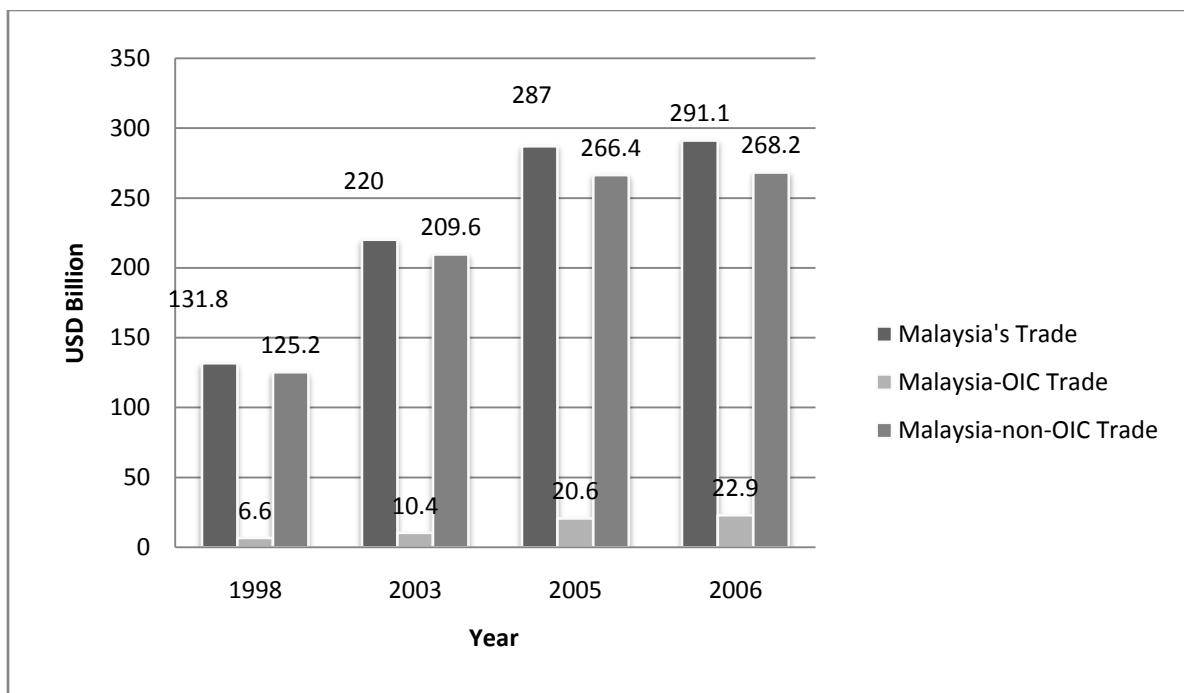
Figure 1-2
Malaysia-OIC Trade for the Year 1998, 2003, 2005, and 2006

Source: http://www.carsicm.ir/icmroot/public/Statistics/OIC-View.htm. Retrieved on 29 September 2010.

Overall, Malaysia's trade with the OIC member countries for the years 1998, 2003, 2005, and 2006 are USD6.6 billion, USD10.4 billion, USD20.6 billion, and USD22.9 billion respectively. On the other hand, Malaysia's trade with non-OIC countries amounted at USD125.2 billion, USD209.6 billion, USD266.4 billion, and USD268.2 billion respectively for the years 1998, 2003, 2005, and 2006. Considering that the OIC countries have more than 60 per cent of vital resources and with 1.3 billion or one-sixth of the world's population, this general picture of the state of OIC trade performance can be deemed as weak. Although there are many factors responsible for the weaknesses of this trade relation, the leaders and the people of the OIC countries believe that there are many fields and opportunities for growth of mutual trade relations. It is therefore crucial to examine and analyze the on-going Malaysia-OIC trade relationship in this context.

1.2 Problem Statement

One of the major challenges of globalization is the liberalization of international trade. The Asian financial crisis of 1997/98 and the recent 2008/09 world financial and economic crises are but a few manifestations of threats and challenges derive from globalization. As such, the tendency towards the process of regionalization is somewhat pertinent as the world economy has become increasingly integrated for the member countries to gain mutual economic benefits and eventually to protect their vested interests. Therefore, it is high time for the Muslim countries to response to the effects of globalization and economic

liberalization by strengthening their economic and trade relations under OIC umbrella.

In recent years, it is in the interest of the Malaysian government to expand its export market to the Middle Eastern countries (Abu-Hussin, 2010). This can be seen in the economic blueprint of the New Economic Model (NEM) which was launched in March 2010, where a new strategy would be adopted to shift its trade dependency on the traditional markets and exploring new markets for exports and imports. Under NEM, one of the markets being targeted is the Middle Eastern countries.

The other important challenge that confronts the Muslim world today is the event of the September 11, 2001 terrorist attack that hit The United States of America in New York City. The implications of the "September 11" or the 9/11 event to the OIC member countries can be seen in the context of four main points. Firstly, it saw the emergence of the so called Islamophobia sentiment especially in the U.S. and other western countries; secondly, a shift of interest for the Muslim countries from U.S. and Europe to their neighboring and brotherhood countries; thirdly, the increasing realization of the importance of the concept of the *Ummah*; and finally, the spread of democratically constituted national government. To this, Malaysia can be seen as a country that is in the right position to play an important role and to provide a new market for the Muslim countries to serve their interest especially in the economic arena.

Although there are extensive literatures on analyzing intra-OIC trade relationship, specific studies dealing with bilateral trade between Malaysia and the OIC member countries are few. Furthermore, there is very little work in most existing empirical studies using the gravity model approach in analyzing Malaysia-OIC trade relationship. This study is an effort to fill this gap on OIC trade literature.

1.3 Research Questions

This research focuses on trade relations between Malaysia and the OIC member countries and will address the subsequent research questions:-

1. What are the patterns of trade between Malaysia and the OIC member countries?

2. Which factors that determine trade flows between Malaysia and the OIC member countries?

3. What are the determinants of Malaysia's export to the OIC member countries?

4. What are factors that determine Malaysia's imports from the OIC member countries?

5. What would be the future prospects of trade relations between Malaysia and the OIC member countries?

1.4   Objectives of the Research

The general objective of this research is to analyze the on-going trade relationship between Malaysia and the Organization of Islamic Cooperation (OIC) member countries.

Specifically, there are five objectives of this research:-

1. To examine the patterns of trade between Malaysia and the OIC member countries.

2. To isolate factors that determines trade flows between Malaysia and the OIC member countries.

3. To identify the determinants of Malaysia's export to the OIC member countries.

4. To investigate factors which determines Malaysia's imports from the OIC member countries.

5. To evaluate the future prospects of trade relations between Malaysia and the OIC member countries.

1.5   Significance of the Study

The focus of this research is to examine the trade relationship between Malaysia and the OIC member countries. In the post-September 11 world and in light with the economic and financial crises, there is a need for Malaysia to shift its trade destinations away from its traditional trading partners, and one of this destination is in the OIC region. For the OIC member countries as a whole, they are still trade more with the outside world than among themselves (Kabir, 1998). In analyzing the determinants of trade using gravity model, this research will provide political economic dimensions to the analysis, which is by incorporating the role of institutions into the gravity equations. Applying a gravity model using panel data will provide a new perspective to the OIC trade literature as most studies were done by using the revealed comparative advantage (RCA), trade intensity index, or the multivariate technique based on the discriminant analysis method. From geographical aspect, this study will focus on Malaysia and the rest of the OIC member countries, unlike previous studies where most of them focusing more on the intra-OIC trade and a sub-group of the OIC countries, such as the Gulf Cooperation Council (GCC). This study will eventually provide some policy analysis and eventually developing policy recommendations in an effort to enhance trade relationship between Malaysia and the OIC member countries in the near future.

1.6   Scope and Limitations of the Study

This study is based on 57 OIC member countries, and the focus will be on Malaysia with all the other 56 OIC member countries for the years of 1997 – 2009. The gravity models used in this study will follow Sharma and Chua (2000) and Rahman (2003, 2009) but departs from them as this study will incorporate a political economic dimension into the gravity equations. Panel data analysis will be employed for the three gravity models of trade, exports, and imports. In carrying out this study, there are several limitations that have been encountered. The major one is the lack of, or the absence of data. This can be seen especially to the state of Palestine where the data is almost nonexistent and the lack of data in certain countries such as Iraq, Somalia, and Afghanistan.

1.7   Organization of the Thesis

The thesis comprises of six chapters. Generally, the first three chapters, which is chapter one, two, and three, are narrative about the background, motivation, theoretical foundation, and the context of the study. Chapter four, five, and six, are the findings, data analysis, and conclusion. Specifically, the thesis is organized as follows. Chapter two reviews the existing literatures and gives a context to this study. This chapter covers the literature on the application of the Gravity Model, intra-OIC trade, Malaysia-OIC trade, and the literature on economic integration of OIC in the sense of the formation of the Islamic Common Market (ICM). This is followed by chapter three which elucidates on methodology, explaining the theoretical framework of the Gravity Model, the

theoretical justification of the Gravity Model and specification for Gravity Model of trade, export, and import. This chapter also explains the SWOT analysis and elaborates about the data being used in the study.

Chapter four is devoted on the analysis of data, analyzing Malaysia-OIC trade pattern on the geographical and the level of development basis, and estimating Malaysia-OIC Gravity Model of trade, export, and import. Discussions on findings are to be conducted in this chapter. Chapter five provides an analysis of the future prospects and challenges of bilateral trade relations between Malaysia and the OIC countries. This is being done by bringing together all the previous findings and analyzing it through the analysis of SWOT. As for the SWOT, it is important to note that the list of SWOT would be detail out first before the analysis to be conducted. Finally, chapter six concludes the whole research. In addition to that, this chapter also provides a summary of the research and highlights some important policy implications of the research findings. Further, this chapter will also look at some recommendations for future research.

CHAPTER TWO

LITERATURE REVIEW

2.1   Introduction

This chapter will contextualize the study by reviewing the existing literature. The discussion will be divided into four sub-categories. The first category will deal on the empirical research done on the bilateral trade using a gravity model. The second category will focus on the intra-OIC trade. The third category, on the other hand, will zoom in on studies of trade relationship between Malaysia and the OIC countries. Finally, the last category deals with the literature on the economic integration of OIC in the form of the Islamic Common Market (ICM).

2.2   Bilateral Trade Linkages: The Gravity Model

The gravity model was first applied to international trade studies by Tinbergen (1962) and Poyhonen (1963) to analyze the patterns of bilateral trade flows among the European countries. However, the origins of the application of the gravity model analysis to the field and sub-field of social sciences can be dated as far back as in the 1930's from various fields such as Astronomy, Sociology, and Regional Economics (e.g: Reilly, 1931; Stewart, 1948; Zipf, 1946).

The model is based on the analogy of Newton's law of gravity which states that the bilateral trade flows between two countries is proportional to its Gross Domestic Product (GDP) as a proxy of size and diminishes with distance, other things being equal (Krugman & Obstfeld, 2009).

Later, the model has been augmented to take into account other factors in explaining trade flows among countries. Frankel *et al.* (1995) for instance, added dummy variables in the model for common border and language. Other researchers have included non-economic variables, such as political and institutional variables into the extended gravity model. Such studies are conducted by Summary (1989), Dollar and Kraay (2002), Levchenko (2004), and Anderson and Marcoullier (2002). They found positive relationship between bilateral trade flows and the political and institutional qualities.

Endoh (1999) employed population variable in the model, which has a negative effects on trade flows. Frankel *et al.* (1995) and Elliott and Ikemoto (2004) introduced per capita income as a proxy to the level of development in explaining international trade. Filippini (2003) pointed out that there are two aspect worth mentioning when using gravity model, that is, the concepts of distance and mass ought to be reinterpreted according to the social and economic phenomenon under scrutiny and the multiplicative formulation of the law was generally kept even if an additive one might have seemed to be as good as the other.

Rahman (2004) estimated the gravity model to investigate Bangladesh trade flows with its trading partners. The results conformed to the notion of gravity model where the size of the economies and the openness of the trading countries have positively determined Bangladesh's trade. On the other hand, transportation cost proved to be a major hindrance in Bangladesh's trade. Meanwhile, Kisu (2006) analyzed Malawi's trade relationship with its major trading partners. He showed that trade of Malawi has positive effect by the size of the importing country's economy and transportation cost, as a proxy of distance, would hinder trade. In addition to that, he found exchange rate volatility would have negative relationship with Malawi's trade.

The gravity models of world trade have also been applied extensively for empirical studies especially in economic integration (Amin, Hamid, & Saad, 2009). Numerous of them have shown that the gravity model have succeeded in explaining bilateral trade data very well for production of homogeneous goods rather than differentiated goods (Hummel & Levinsohn, 1995). Harrigan (1993) investigated the effect of tariff and non-tariff barriers to the OECD member countries on their imports in 1983 bilateral trade data for different manufacturing industries. Chen and Wall (1999), Elliott and Ikemoto (2004), Endoh (2000), Martinez-Zarzoso and Nowak-Lehman (2003), and Aitken (1973) have estimated the gravity models in determining trade flows in the context of economic integration under regional groupings. Deardorff (1998) established that the gravity model can also be used for product-differentiated models and also the Hecksher-

Ohlin models. Details on the theoretical aspects and justifications of the model are discussed in detail in chapter 3, the research methodology chapter, under sub-section 3.1.2.

2.3   The Literature on Intra-OIC Trade

Most of the empirical works about OIC have been generally descriptive in nature (Suayb, 2009). But in recent decades, various researchers have studied on bilateral and intra-OIC trade by using an econometric analysis of gravity model which specifically employing panel data.

Ghani (2007) studied the effects of OIC membership towards the volume of trade. Employing the standard gravity model, he discovered that OIC member countries are susceptible to conflict and their institutional quality is, on average, is relatively low compared to non-OIC countries. Meanwhile, Raimi and Mobolaji (2008) explored the possibility of 'faith-based integration' under the OIC umbrella. Their study and its results can be seen as a strong case for enhancing intra-OIC trade.

Bendjilali (1997) examined major determinants of intra-OIC trade relationship using gravity model and found that trade is correlated positively with the size of their economies and negatively related by transportation cost as a proxy for distance. Al Atrash and Yousef (2000) suggested that intra-Arab trade and Arab trade with the rest of the world are lower than what the gravity equation would be

predicted. The results suggested that there is considerable scope for regional integration. Hassan (1998) pointed out that the volume of intra-regional trade is very low and the dependence on the industrialized countries is considerable. He suggested the removal of tariff and non-tariff barriers under the OIC block countries that can lead to some profitable intra-regional trade channels. Furthermore, he pointed out that it is crucial to make the preferential trade agreements more effective among the OIC member countries by increasing private sector participation rather than through preferential trading arrangement. He also recommended that the OIC member countries should strengthen the backward and forward linkages in production and investment to reap the economies of scale.

Khalifah (1993) analyzed the structure of intra-Muslim countries trade and discovered that the trade contributions of the high income Muslim countries are greater than the lower and upper middle income countries. She argued that any form of trade integration among the Muslim countries must incorporate countries especially from the Middle East. In her analysis, she highlighted the political complexities on that region and uniting them is not an easy task. Rachdi (2008) found that after considering the huge potentials of the OIC member countries, intra-OIC trade is still considered minimal. He reported that two sectors, goods and services have greater potentials for trade.

Ahmed and Ugurel (1998) opined that one of the main reasons for the low intra-OIC trade is that the majority of the OIC countries were being colonized by the western countries, and this led to the strong trade relations with their former colonial master countries. They also pointed out that the prevalence of the incidence of poverty in many OIC member countries hinder trade activities among the member countries. Amin, Hamid, and Saad (2005) examined the extent of intra-trade activities among the five members of the League of the Arab States (LAS) namely Jordan, Saudi Arabia, Syria, Egypt, and Sudan. By employing the gravity model in the scaled and unscaled forms, they found that the failure of integration measures undertaken. Among other things, they proposed tariff reduction and greater capacity building efforts such as improving the infrastructure to enhance intra-LAS trade.

Yeni, Fatimah, and Khadijah (2008) examined the economic performance of OIC member countries in terms of their exports, Foreign Direct Investment (*FDI*), *GDP*, inflation, education (adult literacy rate), total manufacturing output and their savings. Employing the multivariate technique based on discriminant analysis method, they discovered that export, education, and *GDP* are the most crucial factors in explaining growth among the four geographical groups of the OIC countries (Africa, Asia, Middle East, and Western Hemisphere).

2.4   The Literature on Malaysia-OIC Trade

Asmak and Abu-Hussin (2009) analyzed Malaysia's trade relations with the Gulf Cooperation Council (GCC) countries which consist of the United Arab Emirates (UAE), Bahrain, Saudi Arabia, Oman, Qatar, and Kuwait. Using trade intensity index, they showed that Malaysia's trade with the individual GCC country and with GCC as a group were very low during the 1990 – 2007 period of study. They provided suggestions on how to improve Malaysia-GCC trade relations in the future such as to expedite the Free Trade Agreement (FTA) initiative, and focusing on niche areas which they have comparative advantage at such as Halal Food services, Islamic Banking and Finance services, tourism sector, Bio-fuel industries, constructions, education sector, and petrochemical industries.

However, Evelyn *et al*. (2011) find that based on their Gravity Model estimation, culture and religion are insignificant in enhancing bilateral trade between Malaysia and the GCC countries. By using a qualitative method of semi-structured interviews, Abu-Hussin (2010) has arrived into the same conclusion that religious affinity does not help in terms promoting business relations of Malaysia-GCC countries. He also explored the trade relationship between Malaysia and the Gulf Cooperation Council (GCC) countries by employing the revealed comparative advantage (RCA) and the trade intensity index. Through these analyses, he discovered that the trade linkages are still insignificant relative to Malaysia's traditional trading partners. Ismail (2008), on the other hand, examined the pattern of trade between Malaysia and eighty trading partners,

where twenty of which are OIC members. In his research, he found that Malaysia trade with countries which have similar in terms of size but different in terms of factor endowment.

2.5   The Literature on Economic Integration of OIC

Balassa (1961) showed that as the economic integration increases, trade barriers or forms of protectionism, such as tariffs, non-tariff restrictions, import quotas, government regulations, etc., would decrease. Studies specifically addressed on the issue of the establishment of the Islamic Common Market (ICM) as a long term goal for OIC are still scarce (Amin and Hamid, 2009). But there are some studies which supported the establishment of the ICM. Shalaby (1988), Anjum (1996), Ariff (1998), Ahmad and Ugurel (1998), Dabour (2004), and Amin and Hamid (2009) are among them.

Hassan (2002) proposed that the establishment of the Islamic Common Market (ICM) is a step in the right direction and the way forward for the OIC member countries to enhance their trade relationship in the long term. Amin and Hamid (2009) showed that the OIC is now heading in the right direction as far as the establishment of the ICM is concerned. But they warned that the major impediment for the materialization of the ICM was a lack of political commitment among the member countries.

2.6   Summary of Chapter

This chapter reviews the existing literatures on the application of a gravity model in analyzing bilateral trade, the intra-OIC trade, Malaysia's trade with the OIC countries, and literatures on the Economic integration of OIC. Besides putting the study into context, this chapter is of particularly crucial in this study in the sense that it facilitates better understanding of the selection of variables to be used in the gravity model. Many researchers have argued on the urgent need of the OIC member countries to enhance their economic cooperation particularly on the international trade front. A few studies also inspected at the potential benefits of the OIC countries on economic integration. Many challenges and obstacles to forge a greater economic integration among the Muslim countries have also being discussed by many scholars and researchers. There have been many empirical studies done on the bilateral trade between countries using a gravity model, and the intra-OIC trade. Raimi and Mobolaji (2008), Bendjilali (1997), and Yeni, Fatimah, and Khadijah (2008) are among them. However, to date, little studies being conducted on the Malaysia-OIC trade relationship in the literature on OIC. Many studies were focusing on the trade relationship between Malaysia and the Gulf Cooperation Council (GCC), which comprises six countries within the OIC member countries. Examples are Evelyn *et al.* (2011), Abu-Hussin (2010), and Ab Rahman and Abu-Hussin (2009). This research, thus, will fill the gap of OIC trade literature by examining trade relations between Malaysia and the OIC member countries by using a gravity model approach.

CHAPTER THREE

METHODOLOGY

3.1   Introduction

This research is generally based on a combination of quantitative and qualitative research methods though it is more towards a quantitative approach in an attempt to achieve the specific objectives of the study. This chapter is divided into several sections. Section two discusses the theoretical framework, that is, to review theories of international trade primarily from Adam Smith to the recent works by Paul Krugman.

Consequently, it will deal with the main method employed in this research, which is the Gravity Model and provides some theoretical justification for it. Section three in this chapter deals with the issue of model specification. There are three gravity models to be specified; the gravity model of trade, the gravity model of export, and the gravity model of import. Section four discusses about the other method employ in this research, the SWOT analysis. Finally, section five converses on the data set especially on how and where it is obtained and issues related to it.

3.2   Theoretical Framework

It is important first to analyze the other international trade theories before explaining the gravity model and its theoretical foundations. The analysis begins with the theory of absolute advantage, then the Ricardian theory, followed by the Heckscher-Ohlin theory, which comprises of Rybczynski theorem, Stolper-Samuelson theorem, and Factor Price Equalization Theorem. The other international trade theories to be analyzed are the Specific Factors Model, New Trade theory, New Economic Geography, Vernon Product Cycle hypothesis, Linder hypothesis of overlapping demand, the role of the firm, and the multinational firm theory.

The beginning of the theory of international trade can be traced back in the writing of Adam Smith in his 900-page masterpiece, *An Inquiry into the Nature and Causes of the Wealth of Nations* (The Wealth of Nations), published in 1776. In it, he proposed the concept of absolute advantage to explain the pattern of international trade. Smith (1776) argued that trade between two countries occurred due to the concept of absolute advantage. This concept involves the notion of specialization in economy where countries should specialize in a good that it can produced more efficiently than another good and exchange it to other countries which specializes in a good which it can produced more efficiently.

Thus, this concept suggests that in a free trade environment, gains from trade can be achieved when a home country produces some set of goods at a lower cost than a foreign country, vice versa.

Many criticisms so far have been made towards this theory. Salvatore (1997) for instance, questioned on how Smith's theory of absolute advantage can explained trade among developed countries as it is seen only applicable to explain trade among the more advanced developed and less advanced developing countries. In response to Smith's notion of absolute advantage, British economist, David Ricardo, in his treaty, *The Principles of Political Economy and Taxation* published in 1817, introduced the concept of comparative advantage in his attempt to identify reasons for country to trade and to present his case for free trade. This approach, where international trade is solely due to the international differences in relative opportunity costs, is known as the Ricardian theory, where this theory considers labor as the only factor of production. A country then is said to have a comparative advantage in producing a good when the opportunity cost of producing that good is relatively lower than another country. In its basic form, this model predicts that countries tend to export goods in which their labor productivity is relatively high (Krugman and Obstfeld, 2009).

To illustrate the idea, Ricardo (1817) used England and Portugal as examples where they were producing two goods, which are wine and cloth. Ricardo had brilliantly demonstrated that although Portugal is more efficient in the production of both goods, gains from trade are still possible for both countries. Be it as it may, the theory of comparative advantage is perhaps one of the most misunderstood theories in international trade. Krugman and Obstfeld (2009) identify three major misconceptions of this theory, namely Productivity and Competitiveness; The Pauper Labor Argument; and Exploitation. With regard to the first misconception, it is based on the wrong argument that free trade is favorable only to countries which are strong enough to face foreign competition.

Those who uphold this view, argued Krugman and Obstfeld (2009), is clearly failed to understand the vey essence of the theory, that is gains from trade is not depended upon the absolute advantage, but rather, through comparative advantage. Thus, looking at it from the comparative advantage point of view, trade activities are possible and both countries can gain out of it. This is clearly proven by the numerical examples made by David Ricardo in his treaty. The second misconception is the Pauper Labor Argument. Those who adhered to this view believed that it is futile for industries to compete with foreign industries which pay lower wages and less efficient. Again, the examples made by Ricardo showed the fallacy of this argument. It is clear that based on the Ricardo's numerical example, high productivity or low wages does not matter in terms of

gains from trade for home countries, and what really counts is low wages in relations to its own labor.

And the final misconception is exploitation. This is based on the false idea that international trade is only beneficial if one receive high wages. Clearly, the issue here is not about receiving high or low salaries relative to others in other countries, but rather on whether the country and their people becoming worse off in engaging in exports based on low wages (Krugman and Obstfeld, 2009). It is apparent in the Ricardo's numerical examples that one cannot interpret low wage as a form of exploitation unless one is clear on what the alternative is. Thus, one needs to really contemplate on the opportunity cost of not engaging in international trade for the country and its people.

The idea of comparative advantage seems to be one of the most important concepts in the field of international trade. It is a paradigm shift in thinking in a sense that gains from trade is not dependent on the absolute advantage, but rather on the comparative one. Nevertheless, this theory is not without criticisms. Rauch (1991) for instance, questions the ability of this theory to predict volume of trade in each commodity. Furthermore, this theory does not explain reasons of comparative cost discrepancies (Carbaugh, 1985) and differences in factor productivities between commodities (El-Agraa, 1983).

But one of the crucial and important criticisms of the Ricardian Model came from Swedish economists, Heckscher (1919) and Ohlin (1924). Their basic argument is that the Ricardian theory does not include factor endowments as reasons for country to trade. Later developed as the Heckscher-Ohlin theory (H-O theory) or the factor proportions theory of international trade, this theory analyzes differences in factor endowments in different countries and the proportions in which they are used in producing goods.

According to H-O theory, trade occurs among countries because of differences in countries' resources. Therefore, international trade is expected to increase when the differences in the factor endowments between two countries is large (Rahman, 2003). The H-O theory is perhaps the most controversial one since most of the empirical evidence is not in line with what the theory predicted. The most famous of all empirical evidence against this theory is known as the "Leontief Paradox", named after an economist Wassily Leontief who published his works in 1953. Leontief (1953) found that U.S. exports were less capital-intensive goods than its imports, although the U.S. at the time studied was the most capital-abundant country in the world.

The importance of this theory has led to the formulation of certain theories out of it. They are the Rybczynski theorem, Stolper-Samuelson theorem, and Factor-Price equalization theorem. The Rybczynski theorem states that an increase in the endowment of any factor will lead to the expansion of the output that uses it

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relatively intensively and a contraction in the output that uses it less intensively. Basically, it is about a mapping of factor endowments to output in analyzing how output response to endowment. For the Stolper-Samuelson theorem, it describes a relation between the relative prices of output and relative factor rewards, specifically real wages and real return to the other factor (labor). This theorem states that an increase in the price of a commodity will reward more the factor that is used relatively intensively (in the industry) and hurt the factor that is used less intensively (in the industry). For the Factor-Prize equalization (FPE) theorem, it stipulates that factor prices are uniquely determined by commodity prices. Furthermore, free and frictionless trade will cause FPE between two countries if they have identical, linearly homogenous technologies and their factor endowments are sufficiently similar. Samuelson (1949) argued that addition of more goods will increase the likelihood of FPE. Although it has its setbacks, the Heckscher-Ohlin theory is still extremely useful especially in analyzing the effects of trade on income distribution (Krugman and Obstfeld, 2009). Leamer and Levinsohn (1995) see the theory as extremely important in the development of the traditional trade theory for about 60 years.

The other international trade theory, named the Specific Factors Model is designed to demonstrate how one factor of production is specific to a certain industry and its effects to the pattern of trade. Generally, it is a short term factors vision of the world of the H-O theory. The New Trade Theory, developed in the 1970's, brings a new dimension in explaining international trade. Since then, it

has been modified and being explained in a different way by many scholars such as Krugman (1979, 1980), Falvey (1981), Helpman and Krugman (1985), Helpman (1981), and Shaked and Sutton (1984). This theory basically relaxes the assumption of constant returns to scale and focuses on industries which are characterized by economies of scale. Besides economies of scale (or increasing returns to scale), this model considers other two traits in the economy, that is imperfect competition (which is due to economies of scale) and strategic interaction. The New Trade Theory shows that reasons for country to trade need not be just the result of comparative advantage, but also from economies of scale or increasing returns to scale.

The New Economic Geography theory is an attempt to explain why industries cluster within particular countries and regions. According to this theory, it is due to agglomeration economies. The development of this theory is widely viewed as an effort to revive the sub-field of development economics. Both the New Trade Theory and the New Economic Geography are attributed to an economist Paul R. Krugman, who won the Nobel Memorial Prize in economics in 2008 for his contributions in developing these two theories. Vernon product cycle Hypothesis, on the other hand, looks at the role of institutions, specifically on patenting rights and intellectual property rights. The Linder Hypothesis, on the other, identifies reasons for country to trade is dependent on domestic demand. Generally, this theory is a demand-side analysis. Linder (1961) hypothesized that countries with similar demands would develop similar industries. These countries would then

trade with each other in similar but differentiated goods. Nations that demand similar goods will trade more with each other than with countries with dissimilar demands.

The Role of the Firm is a theory in international trade which examines the supply-side of the economy. The supply-side of the economy, according to this theory, is characterized by a set of production functions according to which the factors of production are transformed into consumption goods. For the Multinational Firm Theory, it shows that firms have at least two modes of servicing a foreign market. Besides the exporting option, the other option is to set up multiple production plants to service the different foreign markets. A clear example is by engaging in foreign direct investment (FDI) activities.

3.2.1   The Gravity Model

The gravity model of world trade originates from the law of gravity in Physics called the Newton's law of universal gravitation. This law is discovered by English physicist, Sir Isaac Newton in his famous work, *Philosophiae Naturalis Principia Mathematica* in 1687. This law basically states that the attractive force between two bodies is directly related to their size and inversely related to the distance between them. Mathematically, it can be expressed as:

$$F = G \; \frac{M_i \, M_j}{D^2} \hspace{4cm} (1)$$

where F denotes the gravitational force between two objects i and j, and G is the gravitational constant. In this equation, the gravitational force is directly proportional to the masses of the objects (M_i and M_j) and inversely proportional to the square of the distance D^2 between the point masses. Contextualizing it to the flow of international trade, the equation becomes as follows:

$$Trade_{ij} = \frac{Pop_i \, Pop_j}{D_{ij}} \tag{2}$$

where $Trade_{ij}$ is the value of bilateral trade between country i and country j, Pop_i and Pop_j are country $i's$ and country $j's$ population respectively, where in this case, mass is associated with country's population. D_{ij} is the distance between country i and country j. Thus, it states that the volume of trade are measured by trade, exports, or imports between any two countries is proportional, other things being equal, to the population of the two countries, and diminish with the distance between them.

To facilitate the econometric estimation, the model in equation (2) is transformed into a log form to obtain a linear relationship of the model as:

$$\ln(Trade_{ij}) = \alpha + \beta \, \ln(Pop_i * Pop_j) - \gamma \, \ln(D_{ij}) \tag{3}$$

where α, β, and γ are coefficients to be estimated. Equation (3) says that there are three reasons that determine the volume of trade between two countries; the size

of their populations and the distance between them, where the size of the population is expected to have a positive effect on trade and the distance is negative. Using both Gross Domestic Product (GDP) and GDP per capita instead of population to represent "the masses", equation (3) can be rewritten as:

$$\ln(Trade_{ij}) = \tau + \delta_1 \ln(GDP_i) + \delta_2 \ln\left[\frac{GDP_i}{Pop_i}\right] + \delta_3 \ln GDP_j$$

$$+ \delta_4 \ln\left[\frac{GDP_j}{Pop_j}\right] + \delta_5 \ln D_{ij} \qquad (4)$$

where $\frac{GDP_i}{Pop_i}$ and $\frac{GDP_j}{Pop_j}$ are the exporter's and importer's GDP per capita respectively. Rewrite the GDP and GDP per capita, equation (4) then becomes:

$$\ln(Trade_{ij}) = \alpha + \beta \ln(GDP_i * GDP_j) + \gamma \ln(PCGDP_{ij} * PCGDP_{ij})$$

$$+ \delta \ln D_{ij} \qquad (5)$$

From this baseline model, the gravity model of international trade has been extended to include other factors that influence trade levels. Most empirical studies applying the model added some dummy variables into equation (5) to account for specific factors, such as geographical, cultural, social, political, environmental, institutional, and historical to examine what hinder or support bilateral trade. Adding dummies as explanatory variables p in the model, equation (5) then becomes:

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$$\ln(Trade_{ij}) = \alpha + \beta \ln(GDP_i * GDP_j) + \gamma \ln(PCGDP_{ij} * PCGDP_{ij})$$

$$+ \omega \ln(D_{ij}) + \sum_{s=1}^{p} \vartheta_s G_s \qquad (6)$$

3.2.2 Theoretical Justification for Gravity Model

The gravity model today has become an important workhorse in empirical analysis of international trade and investment policy (Eichengreen and Irwin, 1998). Deardorff (1995) noted that "just about any plausible model of trade would yield something very like the gravity equation, whose empirical success is therefore not evidence of anything, but just a fact of life" (p. 8).

Be it as it may, early applications of gravity model and its predictive ability had been viewed with skepticism. This is primarily due to its lack of theoretical underpinnings. It is not until the second half of the 1970s where a number of studies have appeared to provide a robust theoretical justification for the gravity model. Anderson (1979) is among the first to make an attempt to derive the gravity equation from a model that assumed product differentiation. Later Bergstrand (1985) also explored the theoretical foundation of the gravity model where it was associated with simple monopolistic competition models.

To refute the allegation that the gravity model has weak theoretical foundation, Oguledo and Macphee (1994) derived the gravity equation from a linear expenditure system. Deardorff (1995) proved that the gravity equation characterizes many models and can be justified from standard trade theories.

Helpman and Krugman (1985) developed a gravity equation that involved sectors that produced homogenous products with constant returns and those producing differentiated products with economies of scale. Anderson and Wincoop (2001) derived an operational gravity model by manipulating the CES expenditure system to solve the border puzzle. Evenett and Keller (1998) showed that the standard gravity equation can be obtained from H-O theory for both perfect and imperfect product specialization.

It is also important to highlight the strength of the gravity model compared to other standard trade theories. For one, gravity model can explain why some countries trade more with other countries and allows more factors to be taken. Also, it can successfully analyze the trend of trade between countries over time. Furthermore, gravity model has a strong predictive ability as proves in the extensive empirical trade literatures. And more importantly, it helps to identify anomalies in international trade. More explanation is needed when the empirical results are contradicted with what gravity model predicts.

3.3   Model Specification

The gravity model applied in this study is based on the gravity model used by Sharma and Chua (2000) and Rahman (2003, 2009). Following Rahman (2003), three gravity models of Malaysia's trade with the OIC member countries are estimated in the 1997 – 2009 period: (a) the gravity model of Malaysia's trade (exports + imports), (b) the gravity model of Malaysia's exports, and (c) the gravity model of Malaysia's imports. However, the gravity models used in this study depart from Sharma and Chua (2000) and Rahman (2003, 2009) where it incorporate political economic factors, that is, institutions, to analyze determinants of trade.

Employing panel data analysis using a gravity model, the years estimated is in the period of 1997 – 2009. One of the econometric advantages in using panel data is that it allows individual heterogeneity which is not an available characteristic if time series or cross sectional data is used (Baltagi, 2005). Using panel data would also provide more informative data, more variability, less collinearity among the variables, more degrees of freedom, and more efficiency. Furthermore, it allows the assumptions stated in the cross-sectional analysis to be relaxed and tested (Maddala, 2001).

Rahman (2003) pointed out two major advantages in using panel data rather than using cross-section data alone. First, it can capture the relevant relationships among variables over time and second, it can monitor unobservable trading-

partner-pair's individual effects. Therefore, if individual effects are correlated with the regressors, OLS estimates omitting individual effects would be biased.

3.3.1   The Gravity Model of Trade

The basic gravity model of trade in this study is:

$$\ln\left(Trade_{ijt}\right) = \alpha_0 + \beta_1 \ln(GDP_{it} * GDP_{jt}) + \beta_2 \ln(DIST_{ij}) +$$

$$\varepsilon_{ijt} \tag{1a}$$

where,

$Trade_{ijt}$	= Total trade (exports + imports) between Malaysia (country i) and country j (in million USDs),
GDP_i	= Gross Domestic Product of country i,
GDP_j	= Gross Domestic Product of country j,
$DIST_{ij}$	= Distance between county i capital to country j capital (in kilometers),
ε_{ijt}	= error term; t = time period; α, β = parameters.

The Gross Domestic Product (*GDP*) is considered as the size of an economy. A high level of *GDP* means that an exporting country has the capacity to produce more goods to be traded and would promote economies of scale and product differentiation. For the importing country, it would reflect a high level of income

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to engage more with trade activities. Therefore, a positive sign for this coefficient is expected.

Since the dependent variable of the trade model is the sum of exports and imports of pairs country i and j, the *GDP* variable being used as the independent variable is also presented in pairs by multiplying the *GDP* of country i and country j. This standard gravity model prediction of a positive correlation between the extent of trade and the size of the economy can be use as an explanation for the famous paradox in the economic development literature called the "Lucas Paradox". Lucas (1990) questioned the validity of the assumptions of the neoclassical theory which suggests that international financial integration would lead to a better resource allocation by the movement of capital from rich to poor countries. He compared the U.S. and India and showed that in order for the capital to flow from rich, which is the U.S., to poor, which is India, the return on capital or the marginal product of capital (*MPK*) for India should be about 58 times as large as in the U.S. This hypothetical scenario clearly does not happen in the real world.

Besides the size factor, the standard gravity model also predicts that distance would hinder trade. This is due to cost of transportation. Theories such as Transportation-Cost-Minimizing Model have shown a positive correlation between distance and total transportation costs. Frankel (1997) pointed out that there are three types of costs involved when doing business at a distance: physical shipping costs, time-related costs, and costs of cultural unfamiliarity. Among

these three types of costs, shipping costs are obvious. Thus, a negative sign of the coeffient *DIST* is expected.

Taking into account the political dimension on Malaysia-OIC trade, the role of institutions is incorporated in the model as a dummy variable. The gravity model of Malaysia-OIC trade becomes as follows:

$$\ln(Trade_{ijt}) = \alpha_0 + \beta_1 \ln(GDP_{it} * GDP_{jt}) + \beta_2 \ln(DIST_{ij}) +$$

$$\beta_3 \ln(INS_{it}) + \beta_4 \ln(INS_{jt}) + \varepsilon_{ijt} \tag{2a}$$

where,

INS_{it} = Corruption perceptions index of country *i*.

INS_{jt} = Corruption perceptions index of country *j*.

The quality of institutions is measured by the incidence of corruption in the respective country. Todaro et al. (2009) defined corruption as "the abuse of public trust for private gain; it is a form of stealing" (p. 566), thus corrupt practices would erode the functioning of the institutions and eventually hinder trade activities among countries. On the other hand, an absence of corruption would encourage trade and growth. Several studies have shown that the high incidence of corruption reduces economic growth (e.g: Knack and Keefer, 1995; Mauro, 1995). Thus, less incidences of corruption is expected to have a positive effect on trade.

The corruption perceptions index (CPI) is obtained from the Transparency International (TI) database at http://www.transparency.org/cpi. The index ranges from 0 (highly corrupt) and 10 (very clean). Countries which score on the range of 0 to 4, which reflect an existence of a serious corruption problem, the dummy variable is equal to 0. Whereas countries which score 4.1 and above, the dummy variable is 1. Thus, the coefficients are expected to have a positive sign. The extended gravity model of Malaysia-OIC trade, which is to include variables to test the Hecksher-Ohlin (H-O) theory and the Linder Hypothesis, is specified as follows:

$$\ln(Trade_{ijt}) = \alpha_0 + \beta_1 \ln(GDP_{it} * GDP_{jt}) + \beta_2 \ln(PCGDP_{it} * PCGDP_{jt})$$
$$+ \beta_3 \ln(DIST_{ij}) + \beta_4 \ln(PCGDPD_{ijt}) + \beta_5 \ln(INS_{it}) +$$
$$\beta_6 \ln(INS_{jt}) + \varepsilon_{ijt} \qquad (3a)$$

where,

$PCGDP_i$ = Per capita *GDP* of country *i*,

$PCGDP_j$ = Per capita *GDP* of country *j*,

$PCGDPD_{ijt}$ = Per capita *GDP* differential between country *i* and *j*.

For the *GDP* per capita, it provides a good proxy to indicate the level of development of one country. Since the dependent variable of the trade model is the sum of exports and imports of pairs country *i* and *j*, the *GDP* per capita variable is also being presented in pairs by multiplying the *GDP* per capita of

country i and country j. A develop country means a high consumer demand and a high level of purchasing power especially on imported goods which is deemed as more superior goods than the local goods. A high level of development also means more allocations to be put on research and development (*R&D*) activities which eventually encourage invention and innovation of products. This would increase the export market of the country. Furthermore, it is true that a more develop countries would have a more conducive environment to facilitate trade, such as a sound and robust regulated financial market and institutions, availability of educated workforce, less corrupt government, relative political stability, and good transportation infrastructure. Thus, a positive sign is expected for *PCGDP*. Per capita *GDP* differential between country i and country j is included as a variable in the model to test on whether the Heckscher-Ohlin theory or the Linder Hypothesis dominates Malaysia-OIC trade. The H-O theory hypothesized that countries with dissimilar levels of per capita income would trade more with each other than countries with similar levels of per capita income.

On the other hand, the Linder Hypothesis predicts the opposite, where countries with similar levels of per capita income will engage more on trade primarily due to similar preferences for differentiated products (Rahman, 2009). A positive sign would confirm the H-O hypothesis while a negative sign would be in line with the Linder hypothesis. In testing the Multinational Firm Theory, Foreign Direct Investment (*FDI*) variable has been added in the model. The gravity model of Malaysia's trade with the OIC member countries can be rewritten as:

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$$\ln(Trade_{ijt}) = \alpha_0 + \beta_1 \ln(GDP_{it} * GDP_{jt}) + \beta_2 \ln(PCGDP_{it} * PCGDP_{jt})$$

$$+ \beta_3 \ln(DIST_{ij}) + \beta_4 \ln(PCGDPD_{ijt}) + \beta_5 \ln(FDI_{ijt})$$

$$\beta_6 \ln(INS_{it}) + \beta_7 \ln(INS_{jt}) + \varepsilon_{ijt} \qquad (4a)$$

where,

FDI_{ijt} = Foreign direct investment inflows between country i and

j.

Foreign direct investment (*FDI*) can be seen as an important factor that influences the volume of trade. They are being seen as interrelated (Ariff, 1998). And thus, the higher the *FDI* inflow to the country is, the higher its level of trade. Hejazi and Safarian (2002), and Leitao (2010) supported this relationship in their studies respectively. Besides, *FDI* and trade are also seen as complementary. Therefore, a positive sign is to be expected. Other variables have been added into the gravity model of Malaysia-OIC trade to test the New Trade Theory of international trade. Thus, the augmented gravity model of Malaysia-OIC trade is specified as follows:

$$\ln(Trade_{ijt}) = \alpha_0 + \beta_1 \ln(GDP_{it} * GDP_{jt}) + \beta_2 \ln(PCGDP_{it} * PCGDP_{jt})$$

$$+ \beta_3 \ln(DIST_{ij}) + \beta_4 \ln(PCGDPD_{ijt}) + \beta_5 \ln(FDI_{ijt})$$

$$+ \beta_6 \ln(TR/GDP_{it}) + \beta_7 \ln\left(TR/GDP_{jt}\right) +$$

$$\beta_8 \ln(INS_{it}) + \beta_9 \ln(INS_{jt}) + \varepsilon_{ijt} \qquad (5a)$$

where,

TR/GDP_{it} $\qquad$ = Trade/GDP ratio of country i,

TR/GDP_{jt} $\qquad$ = Trade/GDP ratio of country j.

The Trade/GDP ratio indicates the level of openness of the country. The New Trade Theory hypothesized that an open economy is associated with economies of scale and improved level of competitiveness. "Opennes" in this sense includes, among others, greater liberalization of the economic policy and the promotion of free trade. Examples are like reducing tariff and non-tariff barriers, trade taxes, import duties, quotas, subsidies, and other forms of protectionist measures. These forms of protectionist measures are seen to be a source of distortionary in the operation of market forces and thus, needs to be dismantling gradually. Therefore, the more open countries are, that is, having less elements of distortionary in the market or none of it altogether, the more tendencies for trading countries to trade with each other. Therefore, this variable is expected to have a positive sign.

3.3.2 The Gravity Model of Export

For the gravity model export, the basic gravity equation can be illustrated as follows:

$$\ln(Export_{ijt}) = \tau_0 + \varphi_1 \ln(GDP_{it}) + \varphi_2 \ln(GDP_{jt}) + \varphi_3 \ln(DIST_{ijt}) +$$

$$U_{ijt} \qquad\qquad (1b)$$

where,

$Export_{ijt}$ = Country i (Malaysia) exports to country j (in million USDs),

U_{ijt} = error term, t = time period; τ, φ_s = parameters.

The explanatory variables are the same as being defined and explained in the trade model. And thus, the coefficients of GDP_{it} and GDP_{jt} are expected to have positive signs whereas $DIST_{ijt}$ would have a negative sign. As the dependent variable in the gravity model of Malaysia's export to OIC is just involves one direction, the independent variable of GDP is also presented individually of GDP country i and GDP of country j. Plugging a dummy variable into the equation (1b), the gravity model of Malaysia's exports to OIC countries can be written as follows:

$$\ln(Export_{ijt}) = \tau_0 + \varphi_1 \ln(GDP_{it}) + \varphi_2 \ln(GDP_{jt}) + \varphi_3 \ln(DIST_{ijt}) +$$

$$\varphi_4 \ln(INS_{it}) + \varphi_5 \ln(INS_{jt}) + U_{ijt} \qquad (2b)$$

where the dummy variable, institutions, is the same defined and explained in the trade model. Therefore positive sign is to be expected for these variables. Adding *GDP* per capita of country *i* and *j*, per capita *GDP* differential of country *i* and *j*, and the exchange rate as independent variables in the model to give an empirical content to the Heckscher-Ohlin theory and the Linder Hypothesis, the gravity model of Malaysia's export to OIC member countries becomes:

$$\ln(Export_{ijt}) = \tau_0 + \varphi_1 \ln(GDP_{it}) + \varphi_2 \ln(GDP_{jt}) + \varphi_3 \ln(PCGDP_{it})$$

$$+ \varphi_4 \ln(PCGDP_{jt}) + \varphi_5 \ln(DIST_{ijt}) + \varphi_6 \ln(PCGDPD_{ijt})$$

$$+ \varphi_7 \ln(ER_{ijt}) + \varphi_8 \ln(INS_{it}) + \varphi_9 \ln(INS_{jt}) + U_{ijt} \qquad (3b)$$

where,

ER$_{ijt}$ = The real effective exchange rate index (2005=100). The real exchange rate in this study is defined as the relative price of foreign goods in terms of domestic goods (Stockman, 1987).

In the export model, *PCGDP* can be positive or negative, depending on which effect is dominant, that is, either the absorption effect or the effect of economies of scale. As the dependent variable in the gravity model of Malaysia's export to OIC is just involves one direction, the independent variable of *GDP* per capita is also presented individually of *GDP* per capita country *i* and *GDP* per capita of country *j*.

If country *i* (export country) experiences more the effect of economies of scale due to higher per capita income, opportunities for trade with other countries for a variety of goods and services would increase (Kien, 2009). Thus, a positive sign is expected. But if the absorption effect takes place and eventually country *i* trade less with other country, negative sign for the coefficient is anticipated. Conversely, if country *j* (import country) increases its demand for country *i's* goods because of higher income, *PCGDP* for country *j* would have a positive sign. Whereas due to the effect of economies of scale in country *j* and more goods are produced in country *j*, negative sign is to be predicted.

For per capita *GDP* differential, positive sign supported the H-O hypothesis and a negative sign would confirm with the Linder Hypothesis. A real exchange rate variable has been included in the model. An appreciation of one currency (a rise in real exchange rate) would discourage exports as exporting goods becoming relatively expensive; whereas a depreciation of a currency (a fall in real exchange rate) would promote export flows due to the exporting goods becoming relatively cheaper. This coefficient is expected to have a negative sign. In testing the New Trade Theory in the export model, two regressors have been added in the equation (3b), that is, the trade/GDP ratio of both countries. Both regressors are expected to have positive signs and the explanations and definitions of both variables are the same as in the trade model. Thus, the export model can be rewritten as follows:

$$\ln(Export_{ijt}) = \tau_0 + \varphi_1 \ln(GDP_{it}) + \varphi_2 \ln(GDP_{jt}) + \varphi_3 \ln(PCGDP_{it})$$
$$+ \varphi_4 \ln(PCGDP_{jt}) + \varphi_5 \ln(DIST_{ijt}) + \varphi_6 \ln(PCGDPD_{ijt})$$
$$+ \varphi_7 \ln(ER_{ijt}) + \varphi_8 \ln(TR/GDP_{it}) + \varphi_9 \ln(TR/GDP_{jt}) +$$
$$\varphi_{10} \ln(INS_{it}) + \varphi_{11} \ln(INS_{jt}) + U_{ijt} \qquad (4b)$$

Finally, two explanatory variables of the rate of inflation for both countries have been added and thus, the augmented gravity model of Malaysia's export to OIC is specified as follows:

$$\ln(Export_{ijt}) = \tau_0 + \varphi_1 \ln(GDP_{it}) + \varphi_2 \ln(GDP_{jt}) + \varphi_3 \ln(PCGDP_{it})$$
$$+ \varphi_4 \ln(PCGDP_{jt}) + \varphi_5 \ln(DIST_{ijt}) + \varphi_6 \ln(PCGDPD_{ijt})$$
$$+ \varphi_7 \ln(ER_{ijt}) + \varphi_8 \ln(INF_{it}) + \varphi_9 \ln(INF_{jt}) +$$
$$\varphi_{10} \ln(TR/GDP_{it}) + \varphi_{11} \ln(TR/GDP_{jt}) +$$
$$\varphi_{12} \ln(INS_{it}) + \varphi_{13} \ln(INS_{jt}) + U_{ijt} \qquad (5b)$$

where,

INF_{it} = Inflation rate for country i,

INF_{jt} = Inflation rate for country j.

Inflation rate has a negative correlation on export activities. A higher inflation rate means the general price and wage rates of a country i is relatively high and this could impede export activities. Thus, a negative sign is expected for country i's inflation and positive sign for country j.

3.3.3 The Gravity Model of Import

The standard gravity model of import can be written formally as:

$$\ln(Import_{ijt}) = \mu_0 + \phi_1 \ln(GDP_{it}) + \phi_2 \ln(GDP_{jt}) +$$

$$\phi_3 \ln(DIST_{ij}) + \Omega_{ijt} \qquad\qquad (1c)$$

where,

$Import_{ijt}$ = Country i (Malaysia) imports from country j (in million USDs),

Ω_{ijt} = error term, t = time period; μ, $\emptyset$ = parameters.

Other explanatory variables are the same as defined and explained in the gravity's trade and export models. Therefore, positive signs are to be expected for $\emptyset_1$ and $\emptyset_2$, whereas negative sign for $\emptyset_3$. As the dependent variable in the gravity model of Malaysia's import from OIC is just involves one direction, the independent variable of *GDP* is also presented individually of *GDP* country i and *GDP* of country j. A dummy variable, institutions, for country i and j, is incorporated in the model. Hence, equation (1c) can be expressed as:

$$\ln(Import_{ijt}) = \mu_0 + \phi_1 \ln(GDP_{it}) + \phi_2 \ln(GDP_{jt}) +$$

$$\phi_3 \ln(DIST_{ij}) + \phi_4 \ln(INS_{it}) + \emptyset_5 \ln(INS_{jt}) + \Omega_{ijt} \quad (2c)$$

Where institutions for country i and j, as a dummy variable, is the same defined and explained in trade and export models. Therefore, positive sign is to be

expected for this variable. To test the Heckscher-Ohlin theory and the Linder Hypothesis, some independent variables have been added in the model. The variables are *GDP* per capita of country *i* and *j*, per capita *GDP* differential of country *i* and *j*, and the exchange rate. Adding these independent variables together in (2c) yields the following expression for the gravity model of Malaysia's imports from OIC countries:

$$\ln\left(Import_{ijt}\right) = \mu_0 + \phi_1 \ln(GDP_{it}) + \phi_2 \ln\left(GDP_{jt}\right) + \phi_3 \ln(PCGDP_{it})$$
$$+ \phi_4 \ln\left(PCGDP_{jt}\right) + \phi_5 \ln\left(DIST_{ij}\right) + \phi_6 \ln\left(PCGDPD_{ijt}\right)$$
$$\phi_7 \ln\left(ER_{ijt}\right) + \phi_8 \ln(INS_{it}) + \emptyset_9 \ln(INS_{jt}) + \Omega_{ijt} \qquad (3c)$$

where all variables are the same defined and explained in the trade and export models. But for per capita *GDP* differential, positive sign is to be expected if the H-O hypothesis holds and if Linder hypothesis holds, negative sign is to be expected. But for per capita *GDP*, the sign in the import model can be positive or negative. Since the dependent variable in the gravity model of Malaysia's import from OIC is just involves one direction, the independent variable of per capita *GDP* is also presented individually of per capita *GDP* country *i* and per capita *GDP* of country *j*.

If per capita income increases, and if country *i* (import country) experiences the effect of economies of scale, then negative sign is expected. On the other hand, if absorption effect takes place, country *i* imports more, then the coefficient for

PCGDP country *i* would have a positive sign. Similarly, if country *j* increases its demand from country *i's* goods and services due to higher income, *PCGDP* for country *j* would have a negative sign. Whereas due to economies of scale effect in country *j*, *PCGDP* for country *j* is expected to have a positive sign because more goods and services are produced in country *j*. For real exchange rate, an appreciation of one currency would encourage imports (because foreign goods are relatively cheaper than domestic goods) and depreciation would discourage imports (because foreign goods are relatively more expensive than domestic goods). Thus, a positive sign is expected.

In order to test the New Trade Theory effect in the gravity model of Malaysia's imports from OIC countries, two independent variables have been included in (3c); the trade/GDP ratio of both countries. The definitions and explanations are the same as in both trade and export models. Thus, both variables are predicted to have positive signs. Plugging it into (3c), the import model therefore has the following form:

$$
\begin{aligned}
\ln(Import_{ijt}) = \mu_0 &+ \phi_1 \ln(GDP_{it}) + \phi_2 \ln(GDP_{jt}) + \phi_3 \ln(PCGDP_{it}) \\
&+ \phi_4 \ln(PCGDP_{jt}) + \phi_5 \ln(DIST_{ij}) + \phi_6 \ln(PCGDPD_{ijt}) + \\
&\phi_7 \ln(ER_{ijt}) + \phi_8 \ln(TR/GDP_{it}) + \phi_9 \ln(TR/GDP_{jt}) + \\
&\phi_{10} \ln(INS_{it}) + \phi_{11} \ln(INS_{jt}) + \Omega_{ijt} \qquad (4c)
\end{aligned}
$$

To capture the effect of inflation in the import model, equation (4c) is augmented by including two explanatory variables of inflation of both countries. The Malaysia's import gravity model takes the following form:

$$
\begin{aligned}
\ln(Import_{ijt}) = \mu_0 + {} & \phi_1 \ln(GDP_{it}) + \phi_2 \ln(GDP_{jt}) + \phi_3 \ln(PCGDP_{it}) \\
& + \phi_4 \ln(PCGDP_{jt}) + \phi_5 \ln(DIST_{ij}) + \phi_6 \ln(PCGDPD_{ijt}) + \\
& \phi_7 \ln(ER_{ijt}) + \phi_8 \ln(INF_{it}) + \phi_9 \ln(INF_{jt}) + \\
& \phi_{10} \ln(TR/GDP_{it}) + \phi_{11} \ln(TR/GDP_{jt}) + \\
& \phi_{12} \ln(INS_{it}) + \emptyset_{13} \ln(INS_{jt}) + \Omega_{ijt} \qquad (5c)
\end{aligned}
$$

Other explanatory variables are the same as defined and explained in the gravity's trade and export models. But for inflation, it is viewed to have a positive correlation with import activities. Therefore, a positive sign is expected for country i's inflation and negative for country j.

3.4 An Overview of the SWOT Analysis

SWOT analysis is a method generally used in strategic planning of an organization especially in business firms. In this study, however, the SWOT analysis is adopted in evaluating the future prospects of trade relations between Malaysia and the OIC member countries based on results derived from the indirect quantitative analysis and the panel data method using gravity model.

The SWOT analysis, that is, the Strengths, Weaknesses, Opportunities, and Threats has its beginning in the 1960s. SWOT analysis is a general device designed for the early or preliminary stages of decision-making process for the main purpose of strategic planning in a variety of applications (Bartol et al., 1991). The SWOT analysis is divided into two, namely the internal and the external factors. The internal factors are the strengths, which is the positive factor; and weaknesses, which is the negative one. The external factors, on the other hand, comprise the opportunities and threats; whereby the opportunities are the positive factor and the threats are negative. But depending on the circumstances, threats can be seen as a positive factor and thus become an opportunity. In an attempt to maximize the internal strength and external opportunities, and to curtail against the internal weaknesses and the external threats, SWOT analysis is useful in terms of analyzing the future prospects of an organization.

3.5 Sources of Data

The pattern of trade between Malaysia and the OIC member countries will be examined based on geographical groups of Muslim countries and the different level of development among the OIC member countries for the years 1997, 2000, 2005, and 2009 respectively. Figure 3-1 lists the geographical locations of the 56 OIC member countries, where Malaysia is excluded.
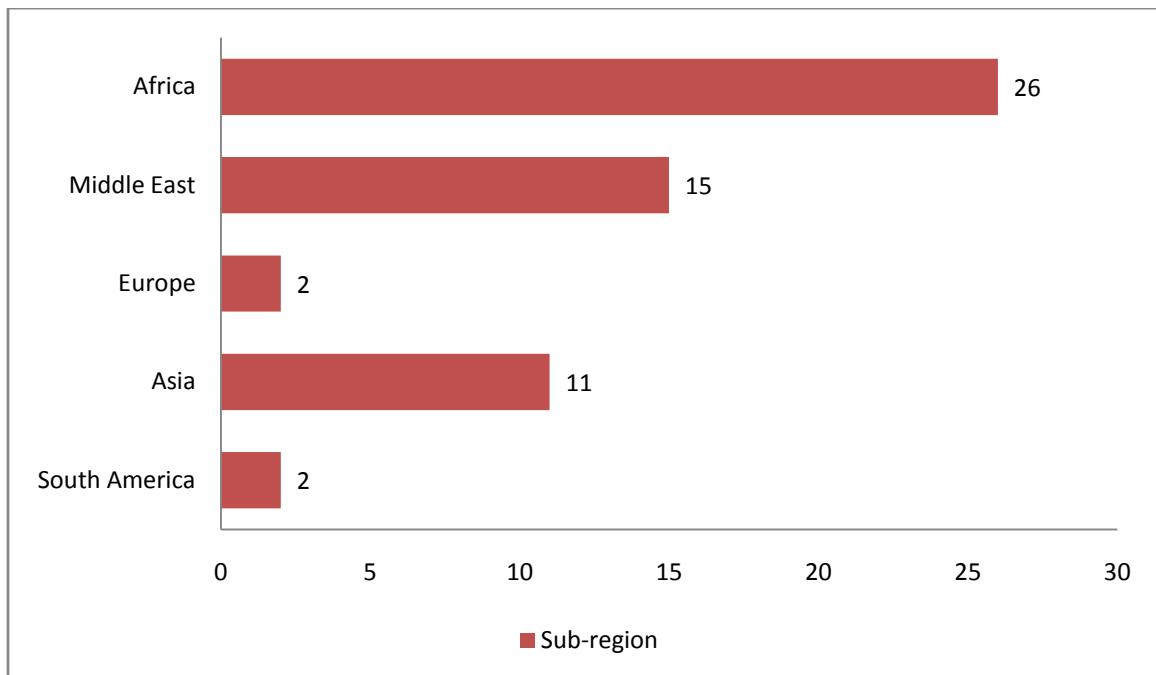
Figure 3-1
Geographical Groups of the OIC Member Countries

Note: *Malaysia excluded.
Source: https://www.cia.gov/index.html retrieved on 29 September 2010.

There are five sub-regions where the OIC member countries are located – Africa, Middle East, Europe, Asia, and South America. The majority of the Muslim countries are located in the African region. There are Algeria, Benin, Burkina-Faso, Cameroon, Chad, Comoros, Cote d'Ivoire, Djibouti, Gabon, Gambia, Guinea, Guinea-Bissau, Maldives, Mali, Mauritania, Morocco, Mozambique, Niger, Nigeria, Senegal, Sierra Leone, Somalia, Sudan, Togo, Tunisia, and Uganda. Countries located in the Middle East are Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Oman, Palestine, Qatar, Saudi Arabia, Syria, The United Arab Emirates (U.A.E.), and Yemen. Meanwhile, countries situated in the Asian region are Afghanistan, Azerbaijan, Bangladesh, Brunei, Indonesia, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Turkmenistan, and Uzbekistan. Albania and Turkey are located in Europe. And the last region, South America, comprises Guyana and Suriname.

For the analysis on the level of development, The OIC member countries will be divided into four sub-groups (Hassan, 1998). The first group is classified as the Least Developed Country (LDC) of the OIC. This group is made up of those members of the OIC which are designated as least developed by the United Nations (UN). They are Afghanistan, Bangladesh, Benin, Burkina-Faso, Chad, Comoro, Djibouti, Gambia, Guinea, Guinea-Bissau, Maldives, Mali, Mauritania, Mozambique, Niger, Sierra Leone, Somalia, Sudan, Togo, Uganda, and Yemen.

The second group is called the Middle-Income (MI) group which comprises of Bahrain, Cameroon, Egypt, Guyana, Jordan, Lebanon, Morocco, Pakistan, Senegal, Suriname, Syria, Tunisia, and Turkey. The third group is categorized as the Oil-Exporting (OE) countries, namely Algeria, Brunei, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (U.A.E.). The last group is defined as Transition Countries (TC) of the OIC countries, which are Albania, Azerbaijan, Kazakhstan, Kyrgyzstan, Turkmenistan, Tajikistan, and Uzbekistan. The division of countries according to various income groups is based on the International Monetary Fund (IMF) and SESRTCIC publications. The different level of development among the OIC member countries, which is measured in percentage, is illustrated in Figure 3-2.
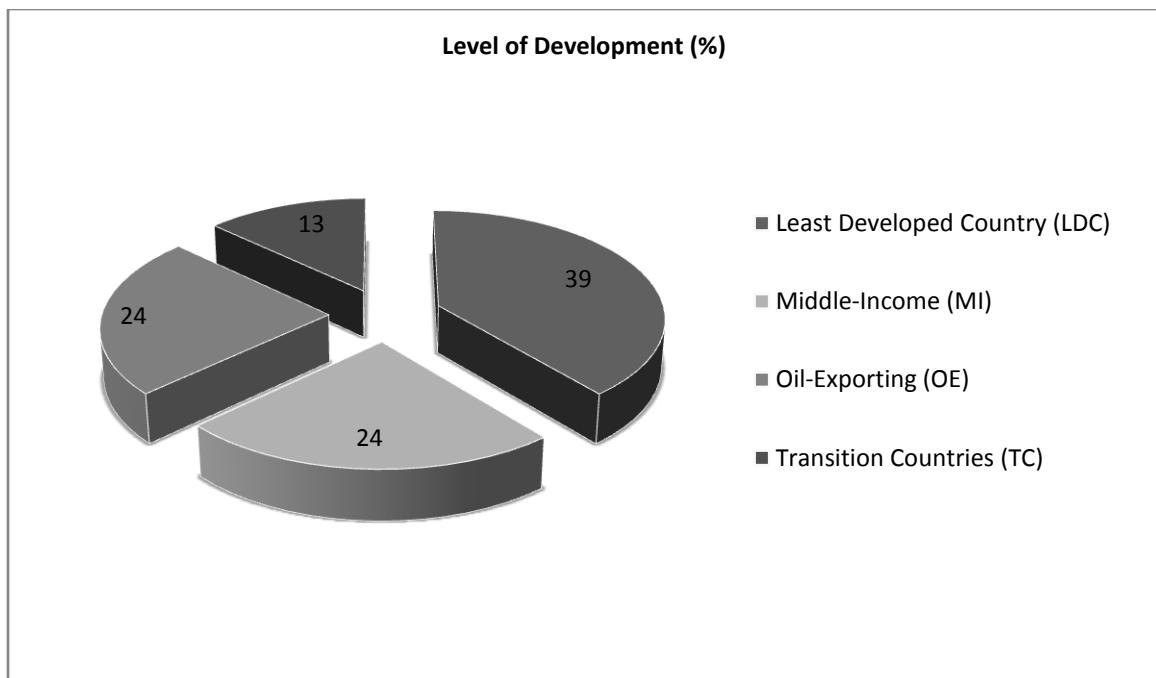
Figure 3-2
Level of Development among the OIC Countries (in Percentage)

Note: *Excluded Malaysia, Palestine, and Cote d' Ivoire.
Source: The United Nations (UN) Comtrade Database, 2000.
      International Monetary Fund (IMF), 2001.
      SESRTCIC Publications, 2001.

Based on Figure 3-2, there are 39 per cent of the OIC member countries categorized as the Least Developed Country (LDC), whereas 24 per cent of them are categorized as the Middle-Income (MI) and Oil-Exporting (OE) group respectively. Finally, 13 per cent of the Muslim countries are group into the Transition Countries (TC) category. All observations are based on annual data. The data used are in real terms. Data on Gross Domestic Product (*GDP*), *GDP* per capita, foreign direct investments (FDIs), real exchange rates, total exports, total imports are obtained from the *World Development Indicators (WDI)* database of

the World Bank and also from the *International Financial Statistics (IFS)*, *CD-ROM* database and website of International Monetary Fund (*IMF*). Data on Malaysia's exports (country i export) to all other countries (country $j's$), Malaysia's imports (country i imports) from all other countries (country $j's$) are obtained from the *Direction of trade statistics*, *CD-ROM* database and website of International Monetary Fund (*IMF*).

Data on the distance (in kilometer) between Kuala Lumpur (capital of Malaysia) and other capital cities of country j are obtained from an Indonesian website: www.indo.com/distance. The data on Consumer Price Index (*CPI*) of all the Muslim countries are collected from the *World Development Indicators (WDI)* database of the World Bank and the Center of Advanced Research & Studies of the Islamic Common Market website: www.carsicm.ir. For the measurement of the level of institutional quality, that is measured by the corruption index is obtained from the Corruption Perceptions Index (CPI) from Transparency International (TI) and retrieved from TI database at www.transparency.org/cpi.

3.6 Conclusion

This chapter has discussed on the issue of methodology and has determined the research methodologies used in order to achieve the specific research objectives as outlined in Chapter One. This chapter has also reviewed theories of international trade and specifying the gravity model of trade, export, and import. Apart from that, it has also provided and overview of the SWOT analysis and details on how the data were obtained into the empirical analysis in this research.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1   Introduction

This chapter focuses on the empirical analysis of trade relations between Malaysia

and the OIC member countries. It is organized as follows. Section two examines

patterns of bilateral trade relations between Malaysia and the OIC member

countries, primarily based on the geographical basis and the level of development

basis. This is followed by section three, which is directed to the analysis of the

determinants of Malaysia-OIC trade, Malaysia's export to OIC and Malaysia's

import from the OIC member countries. These are being done by the panel data

analysis using a gravity model. This section also discusses and interprets the

findings from the gravity models. Finally, this section also makes a comparison of

the findings of the three gravity models, that is, the gravity model of trade, the

gravity model of exports, and the gravity model of imports. It is being presented

in section three of the chapter. Section four will conclude the chapter.

4.2   An Analysis of Trade Pattern

The pattern of trade between Malaysia and the OIC member countries is to be examined by employing an indirect quantitative analysis method. Grigsby (2002) defined indirect quantitative analysis as "a research approach that is indirect in the sense that it uses data already compiled by others (as opposed to original survey research, for example, which collects data directly through questionnaires)" (p. 23). The indirect quantitative analysis is aimed to discover patterns that can be verified empirically (Grigsby, 2002). As being mentioned on chapter three, the analysis of trade pattern between Malaysia and the OIC member countries is to be analyzed based on two categories, that is, on geographical groups of the OIC member countries and the different level of development of the OIC countries.

For the geographical categories, it is based on the Central Intelligence Agency (CIA) publications. On the analysis of the level of development, the OIC members are being divided into four sub-groups (Kabir, 1998). It is being defined based on the International Monetary Fund (IMF) and the Statistical, Economic, and Social Research and Training Centre for Islamic Countries (SESRTCIC) publications. Examining the trade pattern will eventually give insights to the Malaysia-OIC trade performance. Furthermore, it will identify Malaysia's major trading partners in the OIC. This eventually will lead to the identification of opportunities for Malaysia to enhance its trade relationship with the OIC member countries.

The direction of trade of the individual OIC member countries with Malaysia is first to be analyzed for the years of 1997, 1999, 2001, 2003, 2006, and 2009. These years are chosen primarily because to analyze the effects of important events that were occurring at that time, such as the 1997/98 Asian financial crisis, September 11 terrorist attack in the US, Malaysia's chairmanship of the OIC, and the 2007/09 world economic and financial crises. By assessing the trade indicators of the OIC member countries individually, it is clear that one of the important characteristic of the OIC countries is its heterogeneity in terms of total trade, exports, and imports with Malaysia. This can be observed in Tables 4-1, 4-2, and 4-3. The main compositions of Malaysia's merchandise trade to the OIC countries are, among others, electrical and electronics, natural rubber and rubber products, chemicals, food beverages and oils, and manufactured goods.

Table 4-1
The OIC Member Countries Trade with Malaysia, Selected Years and
Countries (USD in Million)

Year/ Country	1997	1999	2001	2003	2006	2009
Indonesia	2688.96	2987.91	3804.49	5068.16	9025.81	11478.91
Saudi Arabia	659.39	588.07	977.73	991.84	2860.09	1920.25
U.A.E.	765.96	836.95	997.29	1415.32	3238.67	4590.91
Pakistan	665.3	569.52	443.15	715.95	902.22	1782.24
Turkey	461.25	332.96	409.91	361.63	702.62	590.52
Brunei	297.8	224.88	278.01	349.46	421.09	510.33
Iran	139.11	137.08	327.48	428.37	1022.6	1010.00
Qatar	36.81	32.27	77.12	53.43	266.12	881.00
Bangladesh	196.54	140.74	186.62	335.37	445.03	830.62
Egypt	229.78	323.21	219.77	477.92	390.94	844.87
Jordan	168.71	104.26	91.48	108.91	208.48	175.28
Yemen	56.52	86.73	346.07	316.74	314.47	277.52

Source: Direction of Trade Statistics, International Monetary Fund.
Retrieved on 9 April 2011 at http//:www.imfstatistics.org/dot

Table 4-1 indicates that among Malaysia's major trading partners in the OIC are

Indonesia, Saudi Arabia, U.A.E., Pakistan, Turkey, and Brunei. On the other

hand, Malaysia's least trading partners in the OIC are Chad, Tajikistan,

Kyrgyztan, Comoros, Guinea-Bissau, and Albania (See Appendix 2). Overall, the

trade performance in terms of value between Malaysia and the OIC member

countries has shown an increasing trend. Malaysia's trade with Indonesia for example has increased substantially from USD2,688.96 million in 1997 to USD11,478.91 million in 2009. This sharp increase in trade volume between these two countries from 1997 to 2009 is due to factors such as common language, cultural affinity, historical backgrounds, and similar borders. In addition to that, it is also clear that the patterns of trade between Malaysia and the individual OIC countries have also been shaped by political and economic events for the past few decades. The 1997/98 Asian Financial crisis, the September 11 terrorist attack in the US, the 2008/09 world economic and financial crises, have to some extent, influences the direction of Malaysia-OIC trade.

Take Malaysia's trade with Gambia for example. Due to the Asian Financial crisis that began in 1997, Malaysia's trade with Gambia has dropped by 63 per cent from USD2.42 million in 1997 to USD0.89 million in 1999 and in the aftermath of the September 11 terrorist attack, Malaysia's trade with Gambia has increased significantly from USD1.82 million in 2001 to USD20.92 million in 2009 (See Appendix 2). From 2001 to 2003 alone, trade between these two countries has jumped by 440 per cent from USD1.82 million to USD9.83 million (See Appendix 2). However, it is still early to analyze the effect on the recent political uprising in the Middle East and North Africa to the Malaysia-OIC trade relationship especially Malaysia's trade relations with Tunisia, Egypt, Syria, Libya, and Yemen. Moreover, the impact of the new independent country of South Sudan is yet to be seen as a crucial factor in influencing Malaysia's trade

with Sudan. Table 4-2 shows Malaysia's exports to OIC member countries for the

year 1997, 1999, 2001, 2003, 2006, and 2009.

Table 4-2
Malaysia's Exports to Individual OIC Member Countries, Selected
Countries and Years (USD in Million)

Year/ Country	1997	1999	2001	2003	2006	2009
Indonesia	1224.87	1231.27	1563.11	2129.15	4074.02	4920.69
Saudi Arabia	299.19	300.6	341.24	408.71	530.31	812.4
U.A.E.	662.42	720.33	833.45	1115.55	2269.74	2849.84
Pakistan	625.12	522.48	399.27	670.85	842.87	1631.87
Turkey	284.31	284.1	366.93	318.3	639.74	477.22
Brunei	273.15	212.85	272.96	317.74	345.56	442.49
Iran	106.97	88.67	178.35	328.22	441.39	685.46
Qatar	17.23	13.59	29.48	39.31	186.41	549.77
Bangladesh	186.01	133.48	171.34	320.32	422.22	808.9
Egypt	220.29	310.35	209.92	454.66	342.00	808.54
Jordan	137.07	68.84	66.45	79.2	150.18	150.81
Yemen	56.51	86.69	50.82	104.59	262.39	203.86

Source: Direction of Trade Statistics, International Monetary Fund. Retrieved on
9 April 2011 at http//:www.imfstatistics.org/dot/

For patterns in Malaysia's exports with the individual OIC countries, Table 4-2 illustrates that five major Malaysia's exports destinations to the OIC in 2009 are Indonesia, followed by U.A.E., Pakistan, Saudi Arabia, and Bangladesh where the amount of Malaysia's exports are USD4,920.69 million, USD2,849.84 million, USD1,631.87 million, USD812.4 million, and USD808.9 million worth respectively. In contrast, countries which Malaysia's exports less in 2009 are Chad, Burkina-Faso, Mali, Tajikistan, and Azerbaijan, with the export value of USD0.29 million, USD0.4 million, USD0.51 million, USD1.29 million, and USD1.63 million respectively (See Appendix 3). Malaysia's exports to Indonesia in 2009 accounted for 28.9 per cent of total exports to the OIC whereas exports to Chad accounted for only 0.002 per cent of Malaysia's total exports with the OIC countries in 2009 (See Appendix 3). Similar pattern can also be identified for the year of 1997, 1999, 2001, 2003, and 2006 of Malaysia exports to Chad and most of the individual OIC countries (See Appendix 3).

Table 4-3 provides data on Malaysia's imports from selected individual OIC member countries for selected years of 1997, 1999, 2001, 2003, 2006, and 2009 respectively.

Table 4-3

*Malaysia's Imports from Individual OIC Member Countries, Selected
Years and Countries (USD in Million)*

Year/Country	1997	1999	2001	2003	2006	2009
Indonesia	1464.09	1756.64	2241.38	2939.01	4951.79	6558.22
Saudi Arabia	360.2	287.47	636.49	583.13	2329.78	1107.85
U.A.E.	103.54	116.62	163.84	299.77	968.93	1741.07
Pakistan	40.18	47.04	43.88	45.1	59.35	150.37
Turkey	176.94	48.86	42.98	43.33	62.88	113.3
Brunei	24.65	12.03	5.05	31.72	75.53	67.84
Iran	32.14	48.41	149.13	100.15	581.21	324.54
Qatar	19.58	18.68	47.64	14.12	79.71	331.23
Bangladesh	10.53	7.26	15.28	15.05	22.81	21.72
Egypt	9.49	12.86	9.85	23.26	48.94	36.33
Jordan	31.64	35.42	25.03	29.71	58.3	24.47
Yemen	0.01	0.04	295.25	212.15	52.08	73.66

Source: Direction of Trade Statistics, International Monetary Fund. Retrieved on
9 April 2011 at http//:www.imfstatistics.org/dot/

Based on Table 4-3, it seems that in the year of 1997, 1999, 2001, 2003, 2006,
and 2009, Malaysia's major importing nation in the OIC is Indonesia. In 2009,
Malaysia's top five importing nations are Indonesia, U.A.E., Saudi Arabia, Qatar,
and Iran with the value of imports of USD6,558.22 million, USD1,741.07 million,
USD1,107.85 million, USD331.23 million, and USD324.54 million

correspondingly. With all the years observed, Malaysia's apparently imports less from countries such as Comoros, Guinea-Bissau, Chad, and Somalia (See Appendix 4). In 2009, five countries which Malaysia imports less in the OIC are Guinea-Bissau, Somalia, Turkmenistan, Djibouti, and Afghanistan where the amount only reached USD0.004 million for Guinea-Bissau and Somalia; USD0.01 million for Turkmenistan and Djibouti; and USD0.03 million for Afghanistan (See Appendix 4). In 2009, Malaysia's imports to Indonesia amounted of 55 per cent of Malaysia's total import value to the OIC for that year. In 1997, Malaysia's imports from Indonesia accounted for USD1,464.09 million or around 60 per cent of total import value for the year observed. Conversely, Imports from Guinea-Bissau in 2009 only contributed so negligibly towards Malaysia's total imports with the OIC member countries (See Appendix 4). This trend of low contribution to total's Malaysia's imports can also be seen in 2003, with imports from Guinea-Bissau amounted to only USD0.002 million of the total imports of Malaysia with the OIC in that year (See Appendix 4).

Overall, imports trend has been mixed, where Malaysia's imports from countries such as Afghanistan, Djibouti, and Kyrgyzstan, for example, have shown a declining trend while imports from most of the OIC individual countries, especially Indonesia and U.A.E., have shown a significant increased from 1997 to 2009 (See Appendix 4).

Figure 4-1 illustrates Malaysia's trade performance with the OIC member countries for the year of 1997, 1999, 2001, 2003, 2006, and 2009 respectively. It shows the trend of Malaysia-OIC trade and provides a general pattern for Malaysia trade relationship with the OIC member countries.
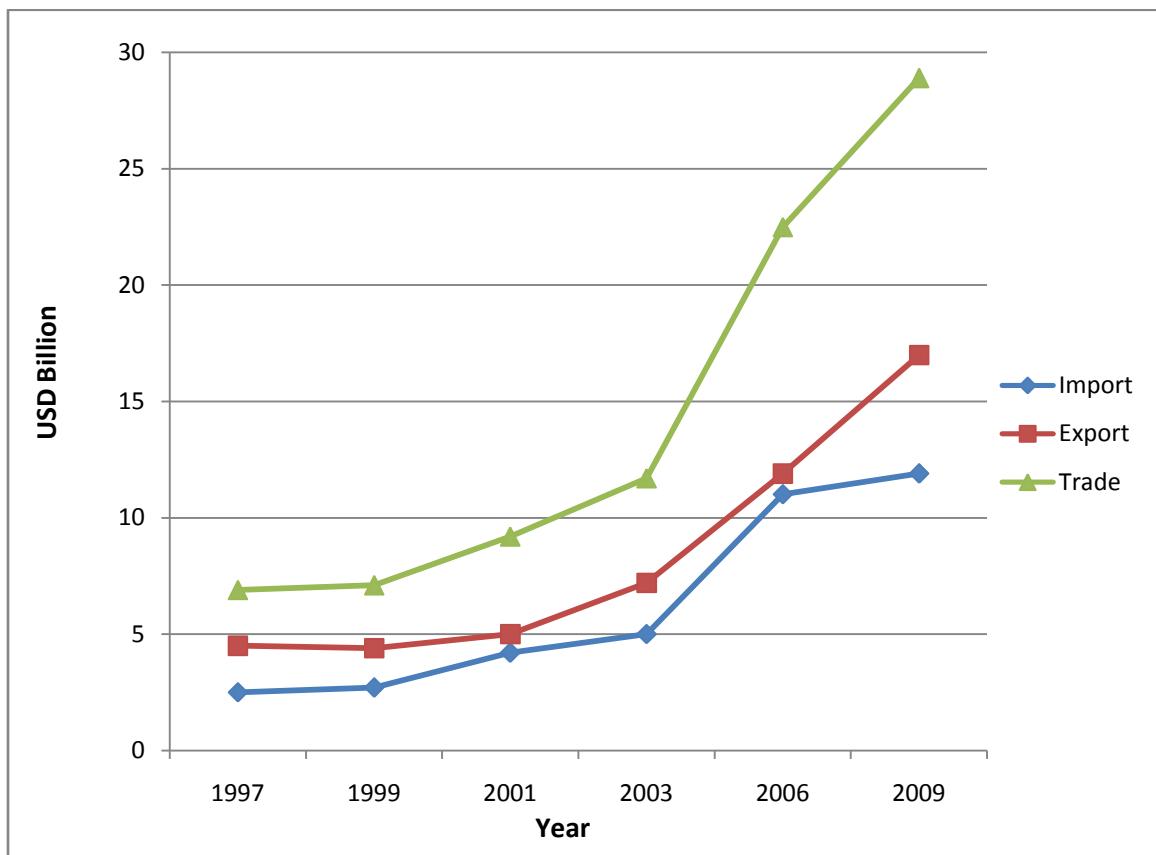
Figure 4-1
Malaysia's Trade Performance with the OIC: Selected Years
(USD in Billion)

Source: Direction of Trade Statistics, International Monetary Fund.
Retrieved on 9 April 2011 at http//:www.imfstatistics.org/dot/

Figure 4-1 depicts Malaysia's trade performance with the OIC member countries for the year 1997, 1999, 2001, 2003, 2006, and 2009, where it amounted to USD6,910.1 million, USD7,081.15 million, USD9,211.21 million, USD11,660.65 million, USD22,483.39 million, and USD28,857.8 million worth respectively. On the whole, the trade, exports, and imports patterns show a promising trend. From 2006 to 2009 alone, trade volume between Malaysia and the OIC has increased by 28 per cent compared to an increase by only 3 per cent from 1997 to 1999. From 1997 to 2009, the value of Malaysia's trade to OIC was multiplied by more than 4 times than the value in 1997.

Due to the 1997/98 Asian Financial Crisis, Malaysia's exports to OIC have declined slightly while total trade and imports have moderated. The momentum of trade, exports, and imports activities have intensified after the September 11 terrorist attack that hit the US in 2001 due to the need to diversify and adjust markets away from the western markets for international trade and investment. As Malaysia became the chairman of the OIC in 2003, which was under the leadership of Malaysia's former Prime Minister Tun Dr. Mahathir Mohamad, the focus of the organization (OIC) has been renewed towards fostering economic relations among its members rather than on political and religious bickering. As a result, the trade performance of Malaysia and the OIC member countries has risen sharply between 2003 and 2006, where it has increased by around 93 per cent from USD11,660.65 million to USD22,483.39 million of values correspondingly. From 2003 to 2009, Malaysia's trade with OIC has enlarged significantly by more

than 147 per cent from USD11,660.65 million in 2003 to USD28,857.8 million in 2009. Nevertheless, as being mentioned in Chapter One, the volume of trade is still small compared to trade volumes of Malaysia's trade with the rest of the world. In addition to that, this amount is also seen as not intensify and high enough in the context of achieving the Mecca declaration of increasing intra-OIC trade to 20 per cent by 2015.

The 2008/09 world economic and financial crises seemed to have a positive impact to Malaysia's trade performance with the OIC. The volume of trade between Malaysia and OIC has increased modestly by 28 per cent to USD28,857.8 million in 2009 from USD22,483.39 million in 2006. By and large, Malaysia's volume of exports has outpaced the volume of imports in the years observed. It is discovered that Malaysia's major trading nations in the OIC, that is, Indonesia, Saudi Arabia, U.A.E., Pakistan, Turkey, and Brunei are members of the World Trade Organization (WTO). This suggests that these countries have strong commitment to free trade and pursuing the agenda of economic liberalization.

4.2.1 Trade Pattern Analysis: Geographical Basis

The pattern of Malaysia's trade with the OIC member countries based on the geographical group is to be analyzed for the years of 1997, 1999, 2001, 2003, 2006, and 2009. The data is shown on Table 4-4.

Table 4-4
Malaysia's Trade Direction with the OIC: Geographical Group Analysis, Selected Years (USD in Million)

Year	Region	Export	Import	Trade
1997	Africa	143.51	115.56	259.07
	Middle-East	1731.16	616.53	2310.88
	Asia	2335.24	1542.16	3877.4
	Europe	284.63	177.07	461.7
	South America	0.71	0.34	1.05
1999	Africa	189.62	91.85	281.47
	Middle-East	1810.98	709.01	2520.87
	Asia	2115.06	1827.21	3942.27
	Europe	284.36	49.29	333.65
	South America	2.64	0.25	2.89
2001	Africa	203.48	46.55	250.03
	Middle-East	2015.16	1811.13	3826.29
	Asia	2414.49	2308.81	4723.3
	Europe	367.39	42.86	410.37
	South America	0.69	0.53	1.22
2003	Africa	416.84	43.554	460.394
	Middle-East	2933.83	1828.94	4243.47
	Asia	3551.46	3041.41	6592.87
	Europe	318.69	43.38	362.35
	South America	1.47	0.1	1.57
2006	Africa	712.981	342.024	1055.01
	Middle-East	4751.6	5495.1	9868.15
	Asia	5731.87	5110.32	10842.2
	Europe	640.5	63.98	704.48
	South America	13.18	0.39	13.57
2009	Africa	1439.42	704.588	2144.01
	Middle-East	6986.59	4272.1	11223.1
	Asia	8088.2	6800.42	14888.6
	Europe	480.22	113.57	593.79
	South America	7.62	0.69	8.31

Source: Direction of Trade Statistics, International Monetary Fund.
Retrieved on 9 April 2011 at http//:www.imfstatistics.org/dot/

Table 4-4 provides data of Malaysia's export, import, and total trade with five geographical groups namely Africa, Middle East, Asia, Europe, and South America. In all the years analyzed, Malaysia's trade is dominated with OIC countries located in the Asian region, where its major trading partner, Indonesia, is situated. The share of Malaysia-OIC trade to the Asian region comprised 56 per cent of Malaysia's total trade with OIC in 1997 whereas in 2009, it accounted to 52 per cent of total trade with OIC. Both Asia and the Middle East have dominated Malaysia's exports, imports, and total trade shares with the OIC member countries compared to the Africa, Europe, and South American regions although most of the OIC member countries, that is 26 of them, situated in the African region. Apparently, Malaysia's engagement in trade is relatively low with countries situated in the South American region. This has to be expected as only two countries situated into the region mentioned.

Overall, for all the years examined, Malaysia's trade with the 11 OIC countries located in Asia is dominant, followed by trade with the Middle Eastern region, the European region, the African region, and lastly the South American region. The prominence of the Asian region in terms of its contribution to the volume of Malaysia's trade with the Muslim countries shows the significance of this region in shaping the direction of Malaysia's trade relations with OIC in the near future. The position of the African region, which is in the third, reveals that there are a lot of opportunities which yet to be tapped in this region where the majority of the OIC member countries are located.

4.2.2 Trade pattern Analysis: Level of Development Basis

The direction of Malaysia's export, import, and trade with the OIC countries based on the different level of development is shown in Table 4-5. The four-sub categories are the least develop countries (LDC), middle-income group (MI), oil-exporting countries (OE), and countries in transition (TC) for the years of 1997, 1999, 2001, 2003, 2006, and 2009.

Table 4-5
Malaysia's Trade Direction with the OIC: Level of Development Analysis, Selected Years (USD in Million)

Year	*Level of Development*	*Export*	*Import*	*Trade*
1997	Least Develop	321.68	46.21	367.89
	Middle-Income	1396.56	322.97	1718.9
	Oil-Exporting	2749.4	2041.95	4791.33
	Transition	17.14	2.39	19.53
1999	Least Develop	300.38	40.92	341.3
	Middle-Income	1314.77	228.57	1543.34
	Oil-Exporting	2770	2385.69	5155.69
	Transition	8.55	3.83	12.38
2001	Least Develop	309.11	325.49	634.6
	Middle-Income	1184.24	196.62	1380.86
	Oil-Exporting	3495.58	3677.36	7172.94
	Transition	5.92	1.85	7.77
2003	Least Develop	616.52	238.564	855.084
	Middle-Income	1805.19	203.23	2008.42
	Oil-Exporting	4680.33	4492.63	9172.96
	Transition	111.95	10.55	122.5
2006	Least Develop	1110.091	85.784	1195.875
	Middle-Income	2380.66	465.4	2846.06
	Oil-Exporting	8303.97	10329.42	18633.39
	Transition	43.75	1.918	45.668
2009	Least Develop	1920.94	241.708	2162.648
	Middle-Income	3541.02	562.6	4121.62
	Oil-Exporting	11217.62	10948.02	22165.7
	Transition	276.91	2.505	279.435

Source: Direction of Trade Statistics, International Monetary Fund.
Retrieved on 9 April 2011 at http//:www.imfstatistics.org/dot/

Noticeably, from Table 4-5, the oil-exporting (OE) categories has dominated Malaysia's exports, imports, and trade for the years observed. Out of the 13 countries categorized as OE, 10 of them are members of the organization of petroleum exporting countries (OPEC). These countries are Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, U.A.E., and Saudi Arabia. On the other hand, the trade contribution of countries in transition (TC) towards Malaysia-OIC trade is the lowest for all the years examined. In 1997 for instance, Malaysia trade to TC accounted for only 0.3 per cent of Malaysia's total trade with OIC and in 2009, it amounted to only 0.97 per cent of overall Malaysia-OIC trade. Except for OE category, which shows a consistent increasing trend, the trade contribution of other categories towards Malaysia seems to be fluctuated without any particular trend. On the whole, the oil exporting (OE) category contributed the most to Malaysia-OIC trade followed by middle income group (MI), least develop countries (LDC) and transition countries (TC) for the years of 1997, 1999, 2001, 2003, 2006, and 2009.

4.3   Determinants of Malaysia-OIC Trade

Previous discourse has analyzed in detail the patterns of trade between Malaysia and the OIC member countries. This section is an attempt to explain the trends that have been discovered by looking at major factors that determines the trade relationship among Malaysia and the OIC countries. In isolating factors that determines Malaysia-OIC trade, that is, exports plus imports, and investigating the determinants of Malaysia-OIC exports and Malaysia-OIC imports, gravity models are to be estimated respectively in the 1997 – 2009 period. Towards this end, three models are used for the purpose of the estimation; these are fixed effects (FE), random effects (RE), and pooling data (OLS) models.

For the panel analysis, unbalanced data are to be used for the three models and thus, the Hausman test is to be employed to determine whether FE model or RE model is more appropriate to be employed. It is important to note the problems of estimating the FE model for all three models of Malaysia's trade, export, and import. According to Rahman (2003), "we cannot directly estimate variables that do not change over time because inherent transformation wipes out such variables" (p. 17), and as such the dummy and distance variables need to be dropped.

This problem can be solved by running a second stage regression with taking into account the individual effects as the dependent variable whereas the dummy and

distance as independent variables. The equation to be estimated for the second stage regression thus as follows:

$$IE_{ij} = \alpha_0 + \beta_1 \ln(Distance_{ij}) + INS_{jt} + \mu_{ij} \qquad (4.1)$$

Where IE_{ij} is the individual effects and $Distance_{ij}$ denotes to distance and the INS_{jt} is the quality of institutions measured in this study by using the corruption perception index of country j.

4.3.1 Estimation of the Gravity Model: Malaysia's Trade with OIC

The gravity model of equation (5a) is to be estimated. For FE model, after dropping the distance and dummy variables becomes as follows:

$$\ln(Trade_{ijt}) = \alpha_0 + \beta_1 \ln(GDP_{it} * GDP_{jt}) + \beta_2 \ln(PCGDP_{it} * PCGDP_{jt})$$
$$+ \beta_3 \ln(PCGDPD_{ijt}) + \beta_4 \ln(TR/GDP_{it}) + \beta_5 \ln(FDI_{ijt})$$
$$+ \varepsilon_{ijt} \qquad (4.2)$$

Where: $Trade_{ijt}$ = Total trade (exports + imports) between Malaysia (country i) and country j (in million USDs); GDP_i (GDP_j) = Gross Domestic Product (constant term) of country i (j); $PCGDP_i$ ($PCGDP_j$) = Per capita GDP of country i (j); $PCGDPD_{ijt}$ = Per capita GDP differential between country i and j; TR/GDP$_{it}$ = Trade/GDP ratio of country i; FDI_{ijt} = Foreign direct investment inflows between country i and j; and ε_{ijt} = error term; t = time period; α, β = parameters.

The estimation results for the Malaysia-OIC trade model of the equation (5a) and

(4.2) are presented in Table 4-6.

Table 4-6
Estimation Results for Trade Model

Variables	Fixed Effects Model	Random Effects Model	Pooled Model
Constant	-4.923***	3.6196***	4.939***
	(-16.07)	(8.87)	(22.58)
LN($GDP_{i(j)}$)	0.0093***	0.0057	-0.0337***
	(3.65)	(0.61)	(-5.09)
LN($PCGDP_{i(j)}$)	0.5135***	0.0288**	0.043***
	(29.93)	(1.96)	(5.02)
LN($PCGDPD_{ij}$)	0.008	0.0007	-0.003
	(1.00)	(0.06)	(-0.59)
LN(TR/GDP)$_i$	1.029***	1.025***	1.0055***
	(295.24)	(164.30)	(233.24)
LN(FDI)	0.012***	0.027***	0.0125***
	(8.17)	(9.00)	(4.46)
LN($Distance$)		0.094	0.029*
		(2.33)	(1.69)
INS_j		0.0501	-0.0509*
		(1.26)	(-1.83)
R-squared	0.7905	0.995	0.996
F-test	45.46		
Hausman test	0.000		

Notes: * = significant level at 10%
** = significant level at 5%
*** = significant level at 1%
t-statistics are noted in parentheses.

For the Hausman test, the hypothesis is as follows:

H_0: Random Effect Model

H_1: Fixed Effect Model

Since the probability of the Hausman test is 0.000, which is less than 0.05, we reject H_0. Therefore, the Fixed Effect Model is the most suitable model for Malaysia-OIC Trade. In running the second stage regression for the dummy and distance variables, equation (4.1) is to be regressed and the results are shown in Table 4-7.

Table 4-7
Second Stage Regression for Malaysia-OIC Trade Model

Explanatory Variables	*Coefficient (t-statistics)*
Constant	0.3796 (0.11)
LN(*Distance*)	-0.066 (-0.18)
INS_j	1.166 (1.84) *

Notes: * = significant level at 10%
** = significant level at 5%
*** = significant level at 1%

The dependant variable for equation (4.1) is the individual effects. Discussion and interpretation of the results will be conducted in section 4.3.1.2.

4.3.1.1 Diagnostic Test

The FE model thus needs to be tested for multicollinearity. Table 4-8 shows the result.

Table 4-8
Results of Multicollinearity Test

Variables	*LN(*GDP$_{i(j)}$*)*	*LN(*PCGDP$_{i(j)}$*)*	*LN(*PCGDPD$_{ij}$*)*	*LN(*TR/GDP*)$_i$*	*LN(*FDI*)*
LN($GDP_{i(j)}$)	1.0000				
LN($PCGDP_{i(j)}$)	0.8272	1.0000			
LN($PCGDPD_{ij}$)	0.5313	0.7077	1.0000		
LN(TR/GDP)$_i$	0.2321	0.0728	-0.1028	1.0000	
LN(FDI)	0.1592	-0.0792	-0.0883	0.5390	1.0000

Given that there are low wise correlations between the independent variables as seen in the Table 4-8, it can be concluded that there is no serous multicollinearity problem exists in the model. The other method to check whether there is multicollinearity in the model is by conducting an auxiliary regression analysis and then comparing the R^2. Each of the independent variables in the model needs to be regressed on the remaining independent variables and compute the R_i^2's. If any of the R^2 is greater than the original R^2, then it can be said that multicollinearity problem exists in the model. The result for the multicollinearity test for this approach is shown in Figure 4-2.

Original $R^2 = 0.9963$

When log (GDP_{ij}) is the dependent variable, $R^2 = 0.8652$

When log ($PCGDP_{ij}$) is the dependent variable, $R^2 = 0.8875$

When log ($PCGDPD_{ij}$) is the dependent variable, $R^2 = 0.6020$

When log (TR/GDP)$_i$ is the dependent variable, $R^2 = 0.9963$ (Adjusted R^2)

When log (FDI) is the dependent variable, $R^2 = 0.3829$

When log ($Distance$) is the dependent variable, $R^2 = 0.2168$

When INS_j is the dependent variable, $R^2 = 0.2942$

Figure 4-2
Multicollinearity Test by Comparing the R^2

From the results on Figure 4-2, it is clear that the model is free from severe multicollinearity problem. In testing the heteroskedasticity in the model, White Test Heteroskedasticity is used. The result of the test is shown in Table 4-9.

The hypothesis is stated below:

H_0: Homoskedasticity

H_1: Unrestricted Heteroskedasticity

Table 4-9
Heteroskedasticity Test

Source	Chi-square	df	p
Heteroskedasticity	139.55	34	0.0000
Skewness	64.80	7	0.0000
Kurtosis	0.51	1	0.4755
Total	204.85	42	0.0000

Therefore, we reject H_0 at 5 per cent level of significance and this implies that the problem of Heteroskedasticity exists. The Heteroskedasticity problem is being corrected by employing the White Heteroscedasticity Consistent Covariance. The model then needs to be checked for Autocorrelation. Wooldridge test is to be employed for this purpose and the result is illustrated on Table 4-10.

Table 4-10
Test for Serial Correlation

Wooldridge test for autocorrelation in panel data

H_0: no first-order autocorrelation

$F(1, 51) = 365.143$

$Prob > F = 0.0000$

Where, H_0: Autocorrelation not exist

H_1: Autocorrelation exists

In view of the fact that we reject H_0, the model can be deduce to suffer from autocorrelation problem. Therefore, the remedy for the problem is by applying the First-order Auto Regressive Disturbances process, and the results are displayed on Table 4-11.

Table 4-11
Results of Trade Model

LN(Trade)	Parameter Estimates	P-Values	Standard Error
Constant	-1.51***	0.000	0.016
	(-93.37)		
LN($GDP_{i(j)}$)	0.002**	0.047	0.001
	(1.99)		
LN($PCGDP_{i(j)}$)	0.376***	0.000	0.0115
	(32.58)		
LN($PCGDPD_{ij}$)	0.0135***	0.000	0.0028
	(4.77)		
LN(TR/GDP)$_i$	1.004***	0.000	0.0015
	(683.34)		
LN(FDI)	0.0014**	0.011	0.0006
	(2.55)		
R-squared	0.865		
F-test	12.21		

Notes: * = significant level at 10%
** = significant level at 5%
*** = significant level at 1%
t-statistics are noted in parentheses.

4.3.1.2 Discussion of Results on the Trade Model

Since the Hausman test suggests that the FE Model is more appropriate in explaining the Malaysia-OIC trade model, the discussion and interpretation of the results will only deal with the FE model. In the FE model of Malaysia-OIC trade, the coefficient of *GDP* is positive and statistically significant at 5 per cent level. It is as expected and corroborated with the theoretical prediction.

This finding basically implies that Malaysia tends to engage in trade activities with larger economies among the OIC countries. It is estimates that Malaysia's bilateral trade with country *j* will increase by 0.002 per cent when Malaysia's *GDP* and country *j*'s *GDP* increase by 1 per cent. On the other hand, the coefficient of *GDP* per capita of Malaysia and country *j* is also highly significant at 1 per cent level. The coefficient value is 0.376. This brings about that Malaysia's bilateral trade with country *j* will increase by 0.38 per cent as the *GDP* per capita of Malaysia and country *j* increases by 1 per cent. It suggests that Malaysia tends to trade more with OIC countries of high level of development.

These findings entail a positive correlation between economic growth and trade. As growth increases, the ability of a government to spend especially on infrastructures and education would increase. This can be seen as an act of capacity building initiatives which eventually would facilitate and enhance trade activities between countries. The positive sign of the *PCGDP* differential coefficient indicates that the H-O effect dominates the Linder effect in Malaysia's

trade with OIC countries. The coefficient is highly significant at 1 per cent level. The explanation to this would be that Malaysia's major trading partners in the OIC are countries which have relatively similar levels of per capita income, which is in contradict with the H-O hypothesis and more towards the argument on the Linder hypothesis.

The trade/GDP ratio represents a proxy for the level of openness of the country. The coefficient is significant at 1 per cent level and has a positive sign as expected. This finding demonstrates the significance of free trade policy and the pursuit of trade liberalization in enhancing Malaysia-OIC trade. It is estimated that as 1 per cent increase in the openness of trade of Malaysia, Malaysia's trade to country j would increase by 1.004 per cent. This result is crucial especially for policy makers in Malaysia in their attempt to increase trade relations between Malaysia and OIC countries.

As for the *FDI*, the variable is significant at 5 per cent level and has the expected positive sign. This confirms the hypothesis that Foreign Direct Investment (*FDI)* and trade are positively correlated and complementary. Malaysia's trade with country j increases by 0.001 per cent as the *FDI* inflow to Malaysia increases by 1 per cent. Policies to attract *FDI* coming in are needed in an attempt to increase Malaysia-OIC trade and intra-OIC trade as a whole.

For the second stage regression results, the sign of the dummy variable of INS_j is positive and thus confirmed with expectation and significant at 10 per cent level. It is interesting to compare this result with the analysis of trade patterns. Based on the analysis of trade patterns, Malaysia's major trading partner among the OIC member countries in the year of 1997, 1999, 2001, 2003, 2006, and 2009, among others, are Saudi Arabia and Pakistan. Clearly, the incidence of corruption in Saudi Arabia and Pakistan is quite rampant and widespread. This shows the untapped and unexplored trade potentials for Malaysia and the OIC member countries. A gravity model finding suggests that a 1 unit improvement in the Corruption Perception Index of country j will increase Malaysia's bilateral trade by 1.166 per cent. For the distance variable, it is found to be insignificant in explaining Malaysia's trade with the OIC individual countries.

For the purpose of the regression of the trade model, the data for FDI inflows have been powered by two in an attempt to cancel out the negative sign appears on some of the data. The model has R^2 of 0.8646 and the goodness of fit of the model has been checked thoroughly.

4.3.2 Estimation of the Gravity Model: Malaysia's Exports to OIC

Equation (5b) is to be estimated and taking into account the problems of regression of the FE model, variables of distance and dummies are dropped and the model becomes:

$$\ln(Export_{ijt}) = \tau_0 + \varphi_1 \ln(GDP_{it}) + \varphi_2 \ln(GDP_{jt}) + \varphi_3 \ln(PCGDP_{it})$$

$$+ \varphi_4 \ln(PCGDP_{jt}) + \varphi_5 \ln(PCGDPD_{ijt}) +$$

$$\varphi_6 \ln(ER_{ijt}) + \varphi_7 \ln(INF_{it}) + \varphi_8 \ln(INF_{jt}) +$$

$$\varphi_9 \ln(TR/GDP_{it}) + U_{ijt} \tag{4.3}$$

Where: $Export_{ijt}$ = Country i (Malaysia) exports to country j (in million USDs), ER_{ijt} = Real effective exchange rate (*REER*) index (2005=100) at time t, INF_{it} = Inflation rate for country i, INF_{jt} = Inflation rate for country j, U_{ijt} = error term, t = time period; and τ, φ_s = parameters. Other independent variables are the same as being defined and explained in the trade model. Estimation results for equations (5b) and (4.3) are shown in Table 4-12.

Table 4-12
Estimation Results for Export Model

Variables	Fixed Effects Model	Random Effects Model	Pooled Model
Constant	39.638**	38.223*	39.943
	(2.30)	(1.90)	(1.31)
LN(GDP)$_i$	4.563**	5.5796**	6.076*
	(2.46)	(2.68)	(1.93)
LN(GDP)$_j$	1.4678	0.275***	0.174***
	(1.28)	(4.01)	(4.14)
LN($PCGDP$)$_i$	-3.977	-5.882*	-6.948
	(-1.44)	(-1.75)	(-1.36)
LN($PCGDP$)$_j$	-2.448**	-0.4001***	-0.344***
	(-2.01)	(-4.42)	(-6.69)
LN(ER)	-1.287***	-0.279	0.3299
	(-3.56)	(-0.77)	(0.61)
LN(INF)$_i$	0.017	0.059	0.011
	(0.22)	(0.99)	(0.12)
LN(INF)$_j$	-0.021	0.081	0.2297***
	(-0.33)	(1.55)	(3.89)
LN(TR/GDP)$_i$	0.658***	0.557***	0.754***
	(9.61)	(12.29)	(18.09)
LN($Distance$)		-0.702**	-0.356*
		(-2.00)	(-1.76)
INS_j		0.095	-0.3203*
		(0.50)	(-1.75)
R-squared	0.669	0.901	0.9198
F-test	5.00		
Hausman test	0.000		

Notes: *   = significant level at 10%
** = significant level at 5%
*** = significant level at 1%
t-statistics are noted in parentheses.

In the estimation process, the variable per capita *GDP* differentials has been dropped due to collinearity. For the Hausman test, the hypothesis can be seen below:

H_0: Random Effect Model

H_1: Fixed Effect Model

Because of the fact that the probability of the Hausman test is 0.000, which is < than 0.05, we reject H_0. Therefore, the Fixed Effect Model is the most suitable model for Malaysia-OIC Export. For the second stage regression for the dummy and distance variables, equation (4.1) is to be regressed once again and the results are seen in Table 4-13.

Table 4-13
Second Stage Regression for Malaysia-OIC Export Model

Explanatory Variables	Coefficient (t-statistics)
Constant	-99.25 (-2.27)
LN(*Distance*)	10.73 (2.26) **
INS_j	9.497 (1.94) *

Notes: *   = significant level at 10%
**   = significant level at 5%
*** = significant level at 1%
t-statistics are noted in parentheses.

The left hand side of the equation (4.1) is the individual effects. For the discussion and interpretation of the results, it will be done in section 4.3.2.2.

4.3.2.1 Diagnostic Test

To diagnose for multicollinearity, Figure 4-3 illustrates the findings.

Original $R^2 = 0.9198$

When log $(GDP)_i$ is the dependent variable, $R^2 = 0.9912$

When log $(GDP)_j$ is the dependent variable, $R^2 = 0.8365$

When log $(PCGDP)_i$ is the dependent variable, $R^2 = 0.9909$

When log $(PCGDP)_j$ is the dependent variable, $R^2 = 0.8380$

When log (ER) is the dependent variable, $R^2 = 0.1263$

When log $(INF)_i$ is the dependent variable, $R^2 = 0.3487$

When log $(INF)_j$ is the dependent variable, $R^2 = 0.2724$

When log $(TR/GDP)_i$ is the dependent variable, $R^2 = 0.8949$

When log $(Distance)$ is the dependent variable, $R^2 = 0.5205$

When INS_j is the dependent variable, $R^2 = 0.4834$

Figure 4-3
Multicollinearity Test

As can be seen on Figure 4-3, the variables GDP_i and $PCGDP_i$ have been found to have multicollinearity problem. This problem can be solved by dropping these two variables. Thus, the export model is to be re-estimated and the result is shown in Table 4-14.

Table 4-14
Re-estimation Results for Export Model

Variables	Fixed Effects Model	Random Effects Model	Pooled Model
Constant	31.861***	13.424**	9.604**
	(4.01)	(2.56)	(2.93)
LN(GDP)$_j$	4.549***	0.274**	0.088**
	(5.79)	(2.41)	(2.08)
LN($PCGDP$)$_j$	-4.671***	-0.282*	-0.228***
	(-4.33)	(-1.86)	(-4.51)
LN(ER)	-1.19***	-1.123**	-0.336
	(-3.23)	(-2.90)	(-0.59)
LN(INF)$_i$	-0.019	-0.012	-0.084
	(-0.24)	(-0.22)	(-1.03)
LN(INF)$_j$	-0.019	0.101*	0.274***
	(-0.28)	(1.68)	(4.31)
LN(TR/GDP)$_i$	0.716***	0.679***	0.852***
	(10.64)	(14.08)	(21.17)
LN($Distance$)		-0.239	-0.1196
		(-0.42)	(-0.55)
INS_j		0.083	-0.36*
		(0.37)	(-1.79)
R-squared	0.533	0.865	0.9019
F-test	7.26		

Notes: *   = significant level at 10%
** = significant level at 5%
*** = significant level at 1%
t-statistics are noted in parentheses.

The model then needs to be retested for multicollinearity. The result is shown in

Table 4-15.

Table 4-15
Detection Test for Multicollinearity

Variables	$LN(GDP)_j$	$LN(PCGDP)_j$	$LN(ER)$	$LN(INF)_i$	$LN(INF)_j$	$LN(TR/GDP)_i$
$LN(GDP)_j$	1.0000					
$LN(PCGDP)_j$	0.7835	1.0000				
$LN(ER)$	-0.2588	-0.2037	1.0000			
$LN(INF)_i$	0.0049	0.0003	0.0930	1.0000		
$LN(INF)_j$	0.3222	0.2501	-0.0758	0.1370	1.0000	
$LN(TR/GDP)_i$	0.2879	-0.1202	-0.2838	0.0010	0.1115	1.0000

Based on Table 4-15, there exist low pair wise correlations between the independent variables. Thus, it can be concluded that no multicollinearity problems detected in the model. The next step would be for the model to be tested for Heteroskedasticity, and thus, the results are demonstrated in Table 4-16. The hypothesis is stated below:

H_0: Homoskedasticity

H_1: Unrestricted Heteroskedasticity

Table 4-16

Heteroskedasticity Test for Export Model

Source	Chi-square	df	p
Heteroskedasticity	89.21	43	0.0000
Skewness	21.90	8	0.0051
Kurtosis	1.73	1	0.1881
Total	112.84	52	0.0000

Heteroskedasticity problem is being detected through White Heteroskedasticity Test as shown in Table 4-16. Based on Table 4-16, H_0 is rejected, and thus, there exists a problem of Heteroskedasticity. It is therefore being solved by applying the White Consistent Covariance method. The subsequent test on the goodness of fit of the model is Autocorrelation. Again, Wooldridge test is to be used for this reason. The result is shown on Table 4-17.

Table 4-17

Testing for Serial Correlation

Wooldridge test for autocorrelation in panel data

H_0: no first-order autocorrelation

$F(1, 15) = 9.510$

$Prob > F = 0.0076$

Where, H_0: Autocorrelation not exist

H_1: Autocorrelation exists

Given that we reject H_0, the model can be said to experience autocorrelation problem. Since the Autocorrelation problem exists in the export model, the solution to this problem is by employing the Generalised Least Square method. The results are displayed in Table 4-18.

Table 4-18
Results of Export Model (GLS)

LN(Export)	*Parameter Estimates*	*P-Values*	*Standard Error*
Constant	11.623***	0.000	1.865
	(6.23)		
LN(*GDP*)$_j$	0.149***	0.000	0.042
	(3.53)		
LN(*PCGDP*)$_j$	-0.243***	0.000	0.055
	(-4.43)		
LN(*ER*)	-1.028***	0.007	0.379
	(-2.71)		
LN(*INF*)$_i$	-0.211**	0.021	0.092
	(-2.30)		
LN(*INF*)$_j$	0.172***	0.003	0.058
	(2.97)		
LN(*TR/GDP*)$_i$	0.8899***	0.000	0.036
	(24.65)		

Notes: * = significant level at 10%
** = significant level at 5%
*** = significant level at 1%
t-statistics are noted in parentheses.

4.3.2.2 Discussion of Results for Export Model

In Malaysia-OIC export gravity model, the coefficient of country's *j GDP* has a positive sign and found to be highly significant at 1 per cent level. The positive sign is consistent with theoretical explanation. With 1 per cent increase in country *j's GDP*, exports of Malaysia would increase by 0.15 per cent. It is thus empirically proven that Malaysia's export is determined by the size of the economy.

As for the other variable, the negative sign of the per capita *GDP* of country *j* implies that the effect of economies of scale is more dominant than the absorption effect of country *j* as a result of increasing in country *j's GDP* per capita. To put it simply, due to the increase in *GDP* per capita of country *j*, more goods are produced in country *j* and the tendency to import goods from Malaysia is reduced. The sign of the coefficient is clearly corroborates with theoretical expectation and highly significant at 1 per cent level. All else being equal, it is estimated that Malaysia's exports to country *j* decreases by 0.24 per cent as country *j's* per capita *GDP* increases by 1 per cent. For exchange rate, the negative coefficient suggests that an appreciation of the real exchange rate would discourage Malaysia's exports to country *j*. It is estimated that an appreciation of the real exchange rate by 1 per cent would reduced Malaysia's exports to country *j* by 1.03 per cent. This coefficient is highly significant at 1 per cent level and the negative sign concurs with the hypothesis.

It seems that in terms of exchange rate policies, one of the ways for Malaysia to maintain its export competitiveness is through advocating currency devaluation. Although this seems to be appropriate on the surface, it is important for the government to find more sustainable policy options in an attempt to improve its level of export competitiveness such as improving the level of productivity and encouraging competition among firms in particular industries. Furthermore, addressing the structural weaknesses of the economy can also enhance Malaysia's export competitiveness. This can be done through rationalizing subsidy, reforming the labor market, introducing a new tax system, diversifying export market, and most importantly, improving the education system.

Meanwhile, Malaysia's inflation variable has an expected sign and statistically significant at 5 per cent level. It is estimated that a 1 per cent increase in Malaysia's inflation rate will reduce Malaysia's exports to country j by 0.21 per cent. This is clearly in line with the theoretical prediction as high inflation in one's country will have a negative impact on export activities. As for the country's j inflation variable, it is highly significant at 1 per cent level and possessed the expected sign. It seems that Malaysia's exports to OIC member countries will increase by 0.17 per cent when the inflation rate increases by 1 per cent in the country j. While for the trade GDP ratio, the coefficient value is 0.8898956. It is very significant at 1 per cent level and possessed an expected positive sign. This indicates empirically that Malaysia's exports to country j can

be amplified by promoting pro-liberal and freer trade policies for Malaysian economy. The estimation suggests that Malaysia's exports to country j would increase by 0.89 per cent with the 1 per cent increase in Malaysia's trade-GDP ratio. Attempt to promote free trade, such as abolishing quotas, rationalizing subsidies, reducing trade taxes, among others, need to be put in place to boost Malaysia's export to the OIC countries. With regard to the second stage regression results of the Malaysia-OIC export Gravity Model, the sign of the dummy variable of INS_j is concurred with expectation, where it possessed a positive sign and is significant at 10 per cent level.

The Gravity Model of Malaysia-OIC export suggests that Malaysia's exports to OIC will increase by 9.5 per cent if 1 unit of improvements occurred in the Corruption Perception Index of country j. Recall that findings on the analysis of trade patterns where Malaysia's major trading partner in terms of exports among the OIC member countries in the year of 1997, 1999, 2001, 2003, 2006, and 2009, among others, are Saudi Arabia, Pakistan, and Bangladesh. Without a qualm, the occurrence of corrupt practices in Saudi Arabia, Pakistan, and Bangladesh are quite rampant and widespread. The gravity model results must be seen as potentials of export expansion provided that the fight to reduce the incidence of corruption is being pursued seriously.

For the distance variable, it is found to be significant at 5 per cent level and possessed the wrong sign, thus it is contradiction with the logic of the gravity

model. The possible explanation for this anomaly could be by criticizing the Transportation-Cost Minimizing models, where the effect of technology, which can substantially reduce the transportation cost as the distance farther away, were not being taken into consideration. This anomaly can also be explained by the Endpoint Locations theory in explaining firm's locational factors. In its essence, the theory argued for a non-linear rate structures in the costs of transportation, where most transportation systems always charge consumers less per mile for long distance as opposed to short distance. Furthermore, patterns of Malaysia's export based on the descriptive statistical analysis for the year of 1997, 1999, 2001, 2003, 2006, and 2009 imply that besides Indonesia, Malaysia's major exporting countries in OIC are U.A.E., Saudi Arabia, and Pakistan, which are geographically located far from Malaysia. The export model has R^2 value of 0.53. The model is clear from the multicollinearity problem and has been checked for other specification tests.

4.3.3 Estimation of the Gravity Model: Malaysia's Imports from OIC

For the gravity model of Malaysia-OIC import, equation (5c) is to be regressed but the dummy variables and the distance variables are to be dropped due to the problems of estimating the FE model. The equation (5c) then becomes:

$$\ln\left(Import_{ijt}\right) = \mu_0 + \phi_1 \ln(GDP_{it}) + \phi_2 \ln\left(GDP_{jt}\right) + \phi_3 \ln(PCGDP_{it})$$
$$+ \phi_4 \ln\left(PCGDP_{jt}\right) + \phi_5 \ln(PCGDPD_{ijt}) +$$
$$\phi_6 \ln\left(ER_{ijt}\right) + \phi_7 \ln(INF_{it}) + \phi_8 \ln\left(INF_{jt}\right) +$$

$$\phi_9 \ \ln(TR/GDP_{it}) + \ \Omega_{ijt} \qquad\qquad (4.4)$$

Where: *Import_{ijt}* = Country *i* (Malaysia) imports from country *j* (in million USDs), whereas others independent variables are the same as being defined and explained in the trade and export models. Table 4-19 presents the results of estimation on equations (5b) and (4.4).

Table 4-19
Results of Import Model

Variables	Fixed Effects Model	Random Effects Model	Pooled Model
Constant	-50.973	-42.99	-45.98
	(-1.96)	(-0.93)	(-0.70)
LN(*GDP*)ᵢ	-1.2997	-5.094	-5.54
	(-0.47)	(-1.07)	(-0.82)
LN(*GDP*)ⱼ	-2.727	-0.223	-0.018
	(-1.58)	(-1.15)	(-0.20)
LN(*PCGDP*)ᵢ	2.874	7.983	8.305
	(0.69)	(1.04)	(0.76)
LN(*PCGDP*)ⱼ	3.522*	0.336	0.317***
	(1.92)	(1.30)	(2.88)
LN(*ER*)	2.96***	0.822	-0.1586
	(5.44)	(0.99)	(-0.14)
LN(*INF*)ᵢ	-0.089	-0.0994	0.045
	(-0.73)	(-0.74)	(0.23)
LN(*INF*)ⱼ	0.136	-0.054	-0.426***
	(1.39)	(-0.44)	(-3.37)
LN(*TR/GDP*)ᵢ	0.9896***	1.328***	1.248***
	(9.59)	(12.33)	(13.98)
LN(*Distance*)		-0.5356	0.1086
		(-0.55)	(0.25)
INS_j		0.084	1.679***
		(0.19)	(4.28)
R-squared	0.0185	0.752	0.8007
F-test	10.55		

Notes: * = significant level at 10%
** = significant level at 5%
*** = significant level at 1%
t-statistics are noted in parentheses.

Due to the problem of collinearity, the per capita *GDP* differential variable has been dropped in the estimation process. Figure 4-4 shows the result for multicollinearity testing.

Original $R^2 = 0.8007$

When log $(GDP)_i$ is the dependent variable, $R^2 = 0.9910$

When log $(GDP)_j$ is the dependent variable, $R^2 = 0.8123$

When log $(PCGDP)_i$ is the dependent variable, $R^2 = 0.9908$

When log $(PCGDP)_j$ is the dependent variable, $R^2 = 0.7905$

When log (ER) is the dependent variable, $R^2 = 0.1236$

When log $(INF)_i$ is the dependent variable, $R^2 = 0.3489$

When log $(INF)_j$ is the dependent variable, $R^2 = 0.2508$

When log $(TR/GDP)_i$ is the dependent variable, $R^2 = 0.8505$

When log $(Distance)$ is the dependent variable, $R^2 = 0.5080$

When INS_j is the dependent variable, $R^2 = 0.5785$

Figure 4-4
Multicollinearity Test for Import Model

Based on Figure 4-4, variables GDP_i, GDP_j, $PCGDP_i$, and TR/GDP_i are found to have multicollinearity problem. To overcome the problem of multicollinearity, these variables are to be omitted and the desired variables for the import model are only $PCGDP_j$, ER, INF_i, and INF_j.

The import model then to be re-estimated and the result are depicted in Table 4-20.

Table 4-20
Re-estimation Results for Import Model

Variables	Fixed Effects Model	Random Effects Model	Pooled Model
Constant	-40.549***	42.21***	41.4896***
	(-3.80)	(2.92)	(4.02)
LN(*PCGDP*)$_j$	2.572***	0.006	0.085
	(3.24)	(0.02)	(0.72)
LN(*ER*)	2.599***	1.127***	-0.391
	(3.74)	(0.91)	(-0.20)
LN(*INF*)$_i$	0.049	0.046	0.137
	(0.34)	(0.26)	(0.49)
LN(*INF*)$_j$	0.365***	0.416**	-0.167
	(2.92)	(2.26)	(-0.78)
LN(*Distance*)		-5.011***	-4.207***
		(-3.47)	(-7.74)
INS$_j$		-0.235	0.928
		(-0.33)	(1.47)
R-squared	0.009	0.296	0.359
F-test	42.04		
Hausman test	0.0493		

Notes: * = significant level at 10%
** = significant level at 5%
*** = significant level at 1%
t-statistics are noted in parentheses.

For the Hausman test, the hypothesis is as stated below:

H_0: Random Effect Model

H_1: Fixed Effect Model

Given that the probability of the Hausman test is 0.0493, which is less than 0.05, we reject H_0. Therefore, it is clear that the Fixed Effect Model is the appropriate model for Malaysia-OIC Import. In doing the second stage regression for the dummy and distance variables, equation (4.1) is to be regressed and the results are presented in Table 4-21.

Table 4-21
Second Stage Regression for Malaysia-OIC Import Model

Explanatory Variables	Coefficient (t-statistics)
Constant	44.053 (1.26)
LN(*Distance*)	-4.9298 (-1.29)
INS_j	9.892 (2.51) **

Notes: *   = significant level at 10%
 **   = significant level at 5%
 *** = significant level at 1%
 t-statistics are noted in parentheses.

The dependant variable for equation (4.1) is the individual effects. Discussion and interpretation of the results is to be conducted in section 4.3.3.2.

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4.3.3.1 Diagnostic Test

To detect for multicollinearity problem in the gravity model of Malaysia-OIC import, Table 4-22 demonstrates the result.

Table 4-22
Multicollinearity Test

Variables	$LN(PCGDP)_j$	$LN(ER)$	$LN(INF)_i$	$LN(INF)_j$
LN($PCGDP$)$_j$	1.0000			
LN(ER)	-0.2037	1.0000		
LN(INF)$_i$	0.0003	0.0930	1.0000	
LN(INF)$_j$	0.2501	-0.0758	0.1370	1.0000

Looking on Table 4-22, it shows that there exist low pair wise correlations between the independent variables. Thus, it can be inferred that no multicollinearity problems detected in the model. The following step would be for the import model to be tested for Heteroskedasticity, and thus, the results are demonstrated in Table 4-23. The proposition for this is stated as follow:

H_0: Homoskedasticity

H_1: Unrestricted Heteroskedasticity

Table 4-23
Testing for Heteroskedasticity on the Import Model

Source	Chi-square	df	p
Heteroskedasticity	58.70	19	0.0000
Skewness	9.13	5	0.1040
Kurtosis	1.12	1	0.2903
Total	68.95	25	0.0000

The issue of Heteroskedasticity is being checked through White Heteroskedasticity Test as shown in Table 4-23. Based on Table 4-23, the null hypothesis is rejected, and in consequence, there exists a problem of Heteroskedasticity. It is therefore to be solved by means of the White Consistent Covariance method. The succeeding test on the goodness of fit of the model is Autocorrelation. For that purpose, Wooldridge test is to be used like in both the trade and export models. The result is shown on Table 4-24.

Table 4-24
Testing for Serial Correlation on the Import Model

Wooldridge test for autocorrelation in panel data

H_0: no first-order autocorrelation

$F(1, 15) = 9.919$

$\text{Prob} > F = 0.0066$

Where the propositions are as follows:

H_0: Autocorrelation not exist

H_1: Autocorrelation exists

Given the fact that we reject H_0, the Gravity model of Malaysia-OIC import model is to be concluded of experiencing autocorrelation problem. In view of the fact that the Autocorrelation problem has been detected in the import model, the solution to this problem is by using the Generalised Least Square method. The results are shown in Table 4-25.

Table 4-25
Results of Import Model

LN(Import)	Parameter Estimates	P-Values	Standard Error
Constant	18.493***	0.001	5.811
	(3.18)		
LN($PCGDP$)$_j$	-0.163*	0.086	0.095
	(-1.72)		
LN(ER)	-3.204***	0.007	1.184
	(-2.71)		
LN(INF)$_i$	0.147	0.627	0.303
	(0.49)		
LN(INF)$_j$	0.067	0.720	0.186
	(0.36)		

Notes: * = significant level at 10%
** = significant level at 5%
*** = significant level at 1%
t-statistics are noted in parentheses.

4.3.3.2 Discussion of Results for Import Model

For the Malaysia-OIC Gravity Model of import, many variables have either plagued with the problem of multicollinearity, insignificant, or possessing the wrong signs. The negative sign of the per capita *GDP* of country *j* entails that the absorption effect is more dominant than the economies of scale of country *j* as a result of increasing in country *j's GDP* per capita. In other words, because of the increase in *GDP* per capita of country *j*, more goods are produced in country *j* and the tendency to import goods from Malaysia is reduced.

The sign of the coefficient is in line with the theoretical expectation and significant at 10 per cent level. All else being equal, it is estimated that Malaysia's imports to country *j* declines by 0.16 per cent as country *j's* per capita *GDP* increases by 1 per cent. Another plausible explanation for the negative relationship is due to the internal agglomeration economy. The concept of the agglomeration economies can be understood as the per unit cost reduction as a result of the concentration of several economic actions at a particular spatial setting. Blair (1991) defined agglomeration economies as "cost reductions that occur because economic activity is carried on at one place" (p. 104). In terms of the agglomeration of the inter-industry, an improvement of the level of development of one country will eventually lead to the development of backward as opposed to forward linkages.

As a result of this changing of the economic structure, import activities will decline as the level of development increases because imports would eventually be substituted by local products (Hirshman, 1972). A clear example of this particular approach can be seen in the import-substitution development strategy (Blair, 1991). For the variable of exchange rate, the value is -3.204. It is statistically significant at 1 per cent level but has a wrong sign. In addition, both variables of country's i and j inflation rates are not significant and posses the wrong signs. The value for country i inflation is 0.147, whereas the value for country j inflation is 0.067.

The value of R^2 for the three models of FE, RE, and pooled are very low, which is 0.009, 0.2961, and 0.3586 respectively. Although the values of R^2 are low, the variables included in the regression still have the ability in explaining the variations in the model of FE and RE as in the panel data analysis, R^2 is not important. The value for the R^2 of the Gravity Model of Malaysia-OIC import for the individual effects regression is 0.43. For the individual effects regression results, the sign of the dummy variable of INS_j is corroborated with expectation and is significant at 5 per cent level. With 1 unit of improvement of country's j Corruption Perception Index, Malaysia's imports would increase by 9.89 per cent.

Comparing the result from the gravity model of Malaysia's imports from OIC to the analysis of trade patterns, Malaysia's major importing countries in the OIC for the year of 1997, 1999, 2001, 2003, 2006, and 2009, among others, are Saudi

Arabia, Iran, and Qatar. Noticeably, the incidence of corruption in Saudi Arabia, Qatar, and Iran are quite rampant and extensive. This comparison gives strong evidence of the huge potential and opportunities to increase imports by reducing the incidence of corruption among the OIC member countries in general and Malaysia's major importing nations in particular.

For the distance variable, although it possesses the right sign and in agreement with the gravity model prediction, it is found to be insignificant in explaining Malaysia's imports with the OIC individual countries. Thus, based on the individual effects regression results, it implies that distance is not significantly influence Malaysia's imports from the OIC member countries and institutions is a resistance factor for the Malaysia-OIC import. The explanation of the insignificance of distance in influencing Malaysia-OIC import could be by criticizing the Transportation-Cost Minimizing models, where the effect of technology, which can substantially reduce the transportation cost as the distance farther away, were not being taken into consideration.

The irrelevance of distance can also be explained by the Endpoint Locations theory in explaining firm's locational factors. Basically and fundamentally, the theory argued for a non-linear rate structures in the costs of transportation, where most transportation systems always charge consumers less per mile for long distance as opposed to short distance. Furthermore, patterns of Malaysia's imports based on the descriptive statistical analysis for the year of 1997, 1999, 2001,

2003, 2006, and 2009 imply that besides Indonesia, Malaysia's major importing countries in OIC are U.A.E., Saudi Arabia, Iran, and Qatar, which are geographically located far away from Malaysia.

4.3.4 Comparison of the Three Models

Based on the empirical evidences discovered from trade and export models, it shows that the one single important determinant for Malaysia's trade and export is the size of one country and its level of development. This is not the case for the import model. The openness of the economy is found to be an important factor in enhancing Malaysia's trade and exports to OIC, whereas again, this is not the case for Malaysia's imports from OIC.

It is important to note that distance is insignificant in explaining Malaysia-OIC trade and imports whereas exports, though significant possessed the wrong sign. The level of improvement in the quality of institutions in the OIC countries does have a positive impact on Malaysia's trade, exports, and imports.

4.4   Conclusion

This chapter aimed in conducting an empirical study on bilateral trade relations between Malaysia and the OIC member countries. It examined the trade pattern between Malaysia and the OIC member countries. Furthermore, it isolated factors and investigate determinants of Malaysia-OIC trade, Malaysia-OIC export, and Malaysia-OIC import using a gravity model. Discussions and interpretations of

results of the three models were conducted. The analysis is then being extended by comparing the results of the three models.

Despite efforts made by Malaysia and the OIC, as an organization to boost further Malaysia-OIC and intra-OIC trade ties, findings from the analysis of trade pattern suggests that trade relations of Malaysia-OIC and intra-OIC are still low relative to their potentials. These findings are in line with other studies done on Malaysia-OIC trade, such as Yunus & Ismail (2009) and intra-OIC trade such as Ahamat (2009). Thus, there are still a lot of potentials to increasing trade relationship that is still unexplored. Findings from an indirect quantitative analysis also discovered Malaysia's major trading nations in the OIC. Indonesia, U.A.E., Saudi Arabia, Pakistan, and Turkey are identified among Malaysia's major trading nations in the OIC. On the other hand, Malaysia's major exporting nations in the OIC are Indonesia, U.A.E., Saudi Arabia, Pakistan, and Bangladesh. Whereas Indonesia, Saudi Arabia, U.A.E., Qatar, and Iran are among Malaysia's major importing nations in the OIC.

For the analysis on the geographical basis, the findings demonstrated that Malaysia's trade is dominated both in the Asian and the Middle Eastern regions. Conversely, trade pattern analysis on the level of development basis discovered that the Oil exporting (OE) category contributed the most to Malaysia-OIC trade and followed by the Middle income group (MI). Estimation of the Malaysia-OIC

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gravity model of trade revealed that, among others, the importance of size effects, level of development, and the FDI inflows in determining Malaysia-OIC trade.

For exports flows between Malaysia and the OIC countries, an analysis of the gravity model demonstrated that the major determinants are the size of the economies, level of openness of the economy, inflation and the exchange rates. Malaysia's imports from the OIC countries, on the other hand, are determined by the quality of institutions and not being affected by the distance factor. In comparing the three gravity models, it is suggested that a better quality of institutions tends to promote Malaysia-OIC trade, exports to, and imports from the OIC member countries.

CHAPTER FIVE

INVESTIGATING THE PROSPECTS AND CHALLENGES OF

MALAYSIA-OIC TRADE RELATIONS

5.1   Introduction

This chapter is an attempt to investigate future prospects of trade relations between Malaysia and the OIC member countries. The analysis of SWOT, that is, the strengths, weaknesses, opportunities, and threats are to be employed based on results and findings from the analysis of trade pattern and the panel data estimation technique using a gravity model. As this research employed more of a quantitative method, it has produced various findings and results in answering to the objectives of the study. The SWOT analysis in this study begins with assessing the internal strengths, followed by the internal weaknesses, external opportunities, and finally the assessment of the external threats.

5.2   The SWOT Analysis

The prospects and challenges for trade relations between Malaysia and the OIC member countries are to be investigated by employing the SWOT (strengths, weaknesses, opportunities, and threats) analysis and it is based on the findings from the indirect quantitative analysis and the Gravity Model analysis of Malaysia-OIC trade, Malaysia's exports to OIC, and Malaysia's import from OIC countries. In its very essence, SWOT analysis is about achieving good performance of a company or a country, by recognizing the correct interaction of management with its internal and external environment (Rehber and Turhan, 2002). The SWOT analysis examines the internal strengths and weaknesses as well as the external opportunities and threats (Houben *et al.*, 1999; Collett, 1999).

5.3 Assessing Strengths

5.3.1 The Concept of the *Ummah*

Since the September 11 terrorist attack, many of the Muslim leaders realize the need to cooperate and united under the concept of the *Ummah*. Among other measures, they believe that one of the effective ways to achieve this is through the economic cooperation among them. Although the trade patterns between Malaysia and the OIC countries has shown an increasing trend, but it is still considered low relative to Malaysia's trade with non-OIC member countries. The same trend was also discovered on the intra-OIC trade, where trade among the OIC countries is relatively low compared with them trading with the rest of the world.

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Findings from the Gravity Model of trade suggest that Malaysia's trade to OIC is positively determined by the sizes of the economies and level of development of the countries. It implies the importance of growth and development in an attempt to enhance the Malaysia-OIC trade ties. This is clearly in line with the Islamic teaching for a need of economic cooperation in the *Ummah*. Evidence from the data gathered in examining the pattern of Malaysia-OIC trade shows that from 1997 to 2009, Malaysia's major trading partner in the OIC are Indonesia, Saudi Arabia, and Turkey. It is, therefore, a strategic move for Malaysia to work together with its major trading partners first and play a leading role in terms of promoting the cooperation of the *Ummah* through trade cooperation.

5.3.2 Market Diversification Strategy

In the analysis of trade pattern on the geographical basis, Malaysia's trade with the OIC countries are dominant in the Asian and the Middle-Eastern regions. Whereas Malaysia's trade in other regions of Africa, Europe, and South America are relatively less and not encouraging at best. In terms of level of development, the analysis shows that Malaysia's trade destination is less diversified. For instance, Malaysia's trade relationship is so dominant with the Oil Exporting countries compared to others, such as the Transition Countries.

These findings can be seen as strength in the sense that there is room for Malaysia-OIC trade diversification strategy as far as international trade is concerned. The strategies must not only focusing on the provision of aid and

providing facilities and regulations, but more importantly is on the efforts to create wealth and capacity building initiatives. As the majority of the OIC countries, which is 26 of them, are situated in the African region, it is crucial for Malaysia to give more priorities to develop this particular region. Incentives to attract businesses to this region needs to be formulated among the OIC countries. Blair (1991) identified several locational factors in attracting businesses into a certain region such as quality of life, taxation, local business climate, and the political climate and stability.

5.3.3 Promoting Foreign Direct Investment (FDI)

The empirical analyses of Gravity Models have confirmed that Foreign Direct Investments (FDIs) of Malaysia-OIC are positively correlated with trade. In the context of the Malaysia's trade with the OIC countries, FDI inflows are seen as a complimentary towards trade activities. In this regard, efforts to boost the FDIs are needed in an attempt to enhance the trade relationship between Malaysia and the OIC member countries. One important measure towards this end is in improving the infrastructure and logistics in some OIC countries.

For instance, the setting up of a bond fund to help finance infrastructure projects especially in the least-developed countries area. The OIC countries central banks can invest in a fund to help with infrastructure project financing in poor OIC countries. In line with this, it is important to ensure that these programs being implemented and executed properly. To this, a form of a monitoring system needs

to be formulated to ensure that the fund to be given to the 'right' countries and to be used solely on the infrastructure projects and not for other projects. This can ensure that the incidence of 'leakages' to be minimized in terms of distributing the fund and eventually making sure that the fund to be allocated efficiently.

5.4 Assessing Weaknesses

5.4.1 Barriers to Trade

An empirical analysis of Gravity Models of Export and Trade discovered that level of openness is one of the determinants of Malaysia export and trade to the OIC countries. Until today, it is clear that one of the major obstacles in promoting Malaysia-OIC trade activities are tariff and non-tariff barriers. Bilaterally or multilaterally, tariff and non-tariff barriers should be managed, reduced, or to be removed.

One of the major implications of establishing the Islamic Common Market (ICM) is to overcome these constraints by creating a free trade environment. The negotiations to establish the Trade Preferential System of the OIC (TPS-OIC) should be viewed as an important mechanism in reducing or removing such barriers to the exchange of goods among the OIC member countries. This can be seen as the first institutionalization of tariff reductions with the aim of further enhancing and strengthening intra-OIC trade. This is also an important step for the long term goal of the establishment of the ICM in which trade and investment

will play a major and leading role for economic integration agenda in the Muslim world.

5.4.2 Imbalances in Trade Market

Based on the findings of the indirect quantitative analysis, where the patterns of Malaysia-OIC trade being analyzed through the geographical basis and the level of development, it reveals great disparity in terms of Malaysia's trade destination with the OIC countries. Geographically, the findings show that Malaysia's trade destination is concentrated more with the Asian and the Middle Eastern countries as compared to other regions of Africa, South America, and the European region. Whereas analyzing it through the level of development, the analysis discovered that Malaysia's dominant trade destination to the OIC is the Oil-exporting (OE) categories. Malaysia's trade is relatively less with the other categories of Middle-Income, Least Develop and Transition countries.

5.4.3 Quality of Institutions

Empirical findings of gravity models of trade, exports, and imports discovered that institutional quality, measured by the corruption perception index, has a significant and substantial impact on increasing Malaysia-OIC bilateral trade flows, Malaysia's exports to OIC and imports from OIC. It is interesting to note that most of Malaysia's major trading nations in OIC, as discovered by the analysis of trade patterns, are plagued with serious incidences of corruption, such as Saudi Arabia, Qatar, U.A.E., and Bangladesh, Pakistan, and Yemen.

In Saudi for instance, the practices of bribery, bureaucracy, red tape, and the exercise of commission is prevalent (Evelyn *et al.*, 2011). On the other hand, Abu-Hussin (2010) has discovered that one of the major obstacles of Malaysia-GCC trade is the approval procedure and testing certification. The Gulf Cooperation Council (GCC) comprises of six countries, that is, Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (U.A.E.).

5.5 Assessing Opportunities

5.5.1 Islamic Banking and Finance

From the empirical analysis being done in chapter four, it reveals that the OIC member countries as a whole have not used all their potential to establish a strong and effective trade relation. In an attempt to foster greater economic integration through trade and investment among the OIC member countries, opportunities to expand Malaysia-OIC and intra-OIC trade in the services sector has been identified.

Currently, demand for the Syariah-compliant financial products has grown significantly due to its emphasis on ethics and solid structure. According to Bank Negara Malaysia, there are currently about 600 Islamic financial institutions operating across 75 countries and this industry is currently worth USD1 trillion in assets. In this regard, Malaysia can play a leading role in expanding growth in the Islamic banking and financial industry. Malaysia certainly has the competitive advantage in this industry relative to other OIC countries. In the Sukuk market for instance, Malaysia still holds 66 per cent share of global outstanding Sukuk issued last year.

The recent launched of Malaysia's second capital market blueprint, called the Capital Market Masterplan 2 (CMP2), which is to be implemented from 2011 till 2020, has shown the commitment and seriousness of the Malaysian government to promote this industry to greater heights. Under the CMP2, one of the key areas that need to be focus on is the growth of the Islamic fund management sector. The CMP2 also projected the yearly growth of the net assets value of the Syariah-compliant Islamic unit trust at 20.7 per cent.

5.5.2 The Global Economic and Financial Crises

Based on the analysis of the trade pattern, it is discovered that due to the crisis, the volume of Malaysia-OIC trade has increased from USD22483.39 million in 2006 to USD28857.8 million in 2009. Gravity model analysis also showed that the size of a country, which is measured by the size of the GDP, has positive relationship with the trade level. It is clear that due to the on going crisis in the US and the Euro zone, their growth level have shrunk significantly. Thus, while Malaysia's trade engagement with these countries is expected to decline due to slower exports, Malaysia needs to shift its trade direction to other non-traditional markets and find it niche areas, such as the OIC.

5.6 Assessing Threats

5.6.1 Geopolitical Development in MENA

The perceive threats, as opposed to real threats, on the efforts to enhance the trade relations between Malaysia and the OIC member countries is the recent social uprising occurred in the Middle East and North Africa (MENA) region, dubbed as the Arab Spring. In the aftermath of this event, which started in Tunisia, many uncertainties have arisen in this region especially in matters of governance which would discourage investors to do business in this area. Countries such as Egypt, Syria, Libya, and Yemen, are very much affected by this social unrest. The problem has certainly been exaggerated by the influence of the super power such as the US which has an economic interest in this region especially on the domination of oil supply. Politically, things have become complicated by the involvement of the US on the one hand, and China, Russia, and Iran on the other. The US stance in this issue would be for a regime change whereas for China, Russia, and Iran are to maintain the status quo.

5.7   Summary of Chapter

The summary of the SWOT listings in this Chapter is presented in Table 5-1.

Table 5-1
The List of the SWOT

Strengths	*Weaknesses*
1) The concept of the Ummah.	*1) Barriers to trade*
2) Market diversification strategy	*2) Imbalances in Trade Market*
3) Promoting FDI	*3) Quality of Institutions*
Opportunities	**Threats**
1) Islamic Banking and Finance	1) Geopolitical development in MENA
2) The Global Economic and Financial Crises	

Definitely, by focusing, exploiting, and harnessing the internal strengths identified in the analysis, Malaysia's trade linkages with the OIC member countries could be enhanced further. The current weaknesses, on the other hand, needs to be addressed and overcome especially with regard to the barriers to trade and the quality of institutions. Analysis on this particular issue of overcoming weaknesses is touched in Chapter Six, section 6.3 on policy implications. Opportunities with respect to the Malaysia's trade relationship with the OIC member have been identified, that is, the Islamic Banking and Finance and the on going global and financial crises.

The world economic crisis clearly possesses an opportunity for Malaysia to foster greater trade linkages with the OIC countries as their traditional export markets, such as the US and the European markets are struggling with the economic and financial hardship. The Euro zone nations, especially Greece and Italy, are still grappling with debt crisis while the US economy is still experiencing a "jobless growth". It is also timely for Malaysia and other OIC member countries to attract investors from Europe to invest in the OIC market. Nonetheless, the on going political uprising in the Arab region, which is now intensified in Syria, need to be factor in seriously and considerably. A further discussion and analysis of the overall SWOT listings is done in Chapter Six, section 6.3 on policy implications.

CHAPTER SIX

CONCLUSION AND POLICY IMPLICATIONS

6.1   Introduction

This chapter is a summary of the whole thesis and presents outcomes of this research. Additionally, it discusses the benefits of the research and the policy implications of the research. Finally, it also discusses limitations of the research and recommendations for future research in this particular area.

6.2   Summary of the Findings

This research was primarily motivated by the economic cooperation of Malaysia vis-à-vis the Muslim countries specifically on trade. The research has attempted to analyze in detail Malaysia's trade relationship with the OIC member countries, due to the challenges faced by Malaysian economy in the aftermath of the 2008/09 world economic and financial crises, and the aspiration of the Malaysian government to increase their economic ties with the Middle Eastern countries. In addition, it is also due to the challenge faced by the *Ummah* in the post-September 11 terrorist attack world, such as the emergence of Islamophobia especially in the western nations. Hence, the specific objectives of the study were to examine the Malaysia-OIC trade pattern and to identify factors of determinants of trade

between Malaysia and the OIC countries. It would then investigate the future prospects and challenges of Malaysia-OIC trade linkages.

From Adam Smith's absolute advantage to Krugman's New Economic Geography, efforts have been made by economists in trying to explain why countries trade to each other. Although many theories have been developed since the time of Adam Smith have successfully explained why countries engaged in international trade, they are, to some extent, have failed to explain on why some countries trade more with other countries. It is specifically in this regard that the Gravity Model has been chosen in this research to isolate factors that determine Malaysia-OIC trade.

From the discussion in Chapter two, which is on the literature review, it is clearly suggests the strong predictive ability of a gravity model and in chapter three, it proves strong theoretical justification for the model. The empirical findings of the Gravity Model, together with the results from the descriptive statistical analysis of trade patterns, are then to be used to investigate the future prospects of Malaysia-OIC trade relationship. Towards this end, the SWOT analysis was used and the results were presented in chapter five. It is clear from the results that the OIC market has yet to be fully tapped and there are tremendous opportunities for Malaysia to harness the OIC market via trade and investment activities.

In chapter four, an analysis of Malaysia-OIC trade pattern using an indirect quantitative method revealed that, on the geographical basis, Malaysia's trade with the Asian countries is dominant, where Indonesia is the major trade partner in the region. On the basis of level of development, the pattern is that Malaysia's trade with the Oil Exporting (OE) countries is dominant, followed by the Middle Income (MI), Least Develop Countries (LDC) and the Transition Countries (TC).

In isolating factors that determining trade flows between Malaysia and the OIC member countries, the panel data estimation is employed to estimate the Gravity Model of trade, exports, and imports. For the Gravity Model of trade, the results show that Malaysia's trade with the OIC countries is positively determined by the size of the economies, level of development, per capita *GDP* differential of the countries involved, the inflow of the Foreign Direct Investment (*FDI*), and the level of openness in the Malaysian economy. Distance, however, is insignificant in explaining Malaysia-OIC trade whereas the quality of institutions in the OIC countries has a strong effect in influencing Malaysia-OIC trade. For exports between Malaysia and the individual OIC member countries, the gravity model found that export flows to the OIC are depend on the size of the economies, economies of scale (size effect), exchange rate, and the inflation rate. Although distance is significant in explaining Malaysia-OIC export, but it possesses the wrong sign, which is in contradiction with the gravity model. Quality of institutions in the OIC countries proved to have strong effects in explaining the Malaysia-OIC export. The gravity model of Malaysia-OIC import suggests that

the major determinant of Malaysia's imports is the absorption effects. Distance is shown to be insignificant while the quality of institutions is significant and acquired the right sign.

The SWOT analysis being done in chapter five was to investigate the future prospects of Malaysia-OIC trade relationship. It is based on the findings on the indirect quantitative analysis method and the estimations of panel data using the gravity model. Some of the internal strengths and weaknesses have been identified systematically, such as the role of the *Ummah*, market diversification strategy, and barriers to trade. On the other hand, several external opportunities and threats are being identified, such as Islamic Banking and Finance and the geopolitical development in MENA.

6.3 Policy Implications

Based on the findings, several policy issues can be highlighted and policy recommendations can be developed. The crucial finding with regard to the analysis of the pattern of trade between Malaysia and the OIC member countries is the lack of trade engagement with the OIC member countries in the African region, where the majority of the OIC countries are located. This finding is highlighted in the SWOT listings done in Chapter five as an internal strength in enhancing Malaysia-OIC trade further.

Therefore, it crucial for Malaysia's to promote trade relations with the OIC countries in the African region rigorously. The process of intensification can be done concertedly by all parties especially from various departments of the Malaysian government. Hence, there is an urgent need to build a strategic partnership with this region in terms of economic cooperation particularly in the capacity building programmes and initiatives, to give a start to countries in the African region to initiate trade activities among other OIC countries especially with Malaysia.

One of the crucial sectors that need to be focus immediately is construction, especially in developing a conducive transportation system for doing business. Besides developing physical infrastructure development, it is also crucial in developing the non-physical infrastructure, such as the information communication technology (ICT). This can be done by creating and promoting the use of ICT and in reforming the education system to produce a skilled and IT savvy workforce. The other important finding from the analysis of trade pattern is that Indonesia is Malaysia's major trading, exports, and imports partners. Thus, it is vital for Malaysia, together with Indonesia and other emerging OIC economies, such as Turkey, to form a strategic alliance to play a leading role in enhancing intra-OIC trade in the near future, specifically on achieving the resolutions of the Mecca Summit in 2005, which is to increase intra-OIC trade by 20 per cent in 2015.

Another strength identified in the SWOT is the concept of the *Ummah*. To exploit this strength, it is crucial that the effort towards the establishment of the Islamic Common Market (ICM) to be intensified further. This can be done, among other things, by establishing a secretariat in each of the OIC member countries to conduct studies and research that will collaborate with the Center of Advanced Studies and Research on Islamic Common Market (CARSICM). More importantly, this secretariat can play a role of "data bank" and can work closely with relevant trade bodies in member countries such as ministries of trade and chambers of commerce. Besides, they can work with universities in the OIC countries to promote research and development.

For the analysis of the gravity model, results have shown the importance of openness in the Malaysian economy to enhance Malaysia-OIC trade, where it is listed as weaknesses in the SWOT analysis. For that reason, more efforts to liberalize the economy are needed. Structural and fundamental trade policy reforms are desirable towards this end such as reducing tariff and non-tariff barriers, abolishing quotas and subsidies, and making tax rates, such as corporate tax more competitive. In addition, other important finding from the analysis of gravity model is that exchange rates do matter. To this, it is paramount for the Malaysian government to improve the exports level of competitiveness. But this must be done not through advocating currency devaluation, which is not sustainable in the long run, but rather through addressing the structural weaknesses of the economy and make the necessary adjustments out of it.

The other crucial finding of the gravity model analysis is the important role of the quality of institutions in determining Malaysia's trade, export, and import. This is one of the weaknesses listed in SWOT. Where institutional quality in this research is measured by the incidence of corruption, it is vital for governments in the OIC to intensified efforts to curb corrupt practices. Corruption not only incurs additional cost to economic activities, but is also stifles efforts to increase growth. Corrupt practices will undoubtedly erode the functioning of the institutions and thus, to overcome it involves advocating of good governance, transparency and accountability.

Among the opportunities listed under SWOT analysis is Islamic Banking and Finance. Without a doubt, the crux of the matter here is about the current state of the regulatory environment of the Islamic Banks and the Islamic Finance. For example, there is a need to standardize the regulatory environment of Islamic Financial Services Industry as some countries, such as Malaysia, Yemen, Kuwait, and Turkey have imposed specific laws to regulate their respective Islamic Banks. In addition to this, there is an issue of congruence. There is an urgent call for product standardization of what should be constitute as Syariah-compliant. This is especially true in the key areas in Islamic Finance, such unit trust, capital market, and takaful corporate financing.

For the listing of threat in the SWOT analysis, one important finding that is of worthy of attention is the political tensions in the gulf region. The current political instability in the country affected, such as Syria and Bahrain, will certainly pose some real threats to Malaysia in penetrating their market and other neighboring economies. But certainly it is not a zero-sum-game. In this regard, it is essential for the governments in the OIC to adopt the right approach in the sphere of public relation. For instance, this so-called Arab spring can be seen as a rebranding exercise on the *Ummah*, to show that they are not monolithic, wanting for democracy, social justice, dignity, anti-autocratic regime, and wanting rule of law which is currently taken hold in Syria. It shows many young people in the Muslim countries, especially in the MENA wanting for a better life and wants to liberalize their society further. As the governance and the level of corruption improve, it will then open to economic opportunities further going forward.

6.4 Recommendation for Future Research

It is only natural that many constraints will be encountered in conducting research especially in social sciences. This study is applying a quantitative method of analysis in establishing relationships among variables, confirming theoretical prediction, and making forecast in the future through simulation exercise. It may be useful if future research done from the perspective of a qualitative analysis, which is exploratory in nature. This may be useful especially in getting a perspective from Malaysian firms and the industry players.

As this research is conducted by an econometric analysis, specifically using the panel data method, it would be fruitful if the future research to be conducted by employing an econometric time-series analysis in an efforts to identify demand for Malaysian trade, exports to and import from the OIC member countries respectively.

6.5 Summary of Chapter

This research aimed at analyzing the on-going bilateral trade relationship between Malaysia and the OIC member countries. The empirical analyses have provided important results in achieving the objectives of the research. This chapter summarized the thesis, discussed the policy implications of the findings and put suggestions for future work in this particular field of research.

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Regression Results

Result: Trade (Fixed Effects)

```
. xtreg lntrade lngdpij lnpcgdpij lnpcgdpd lntrgdp lnfdi, fe

Fixed-effects (within) regression            Number of obs      =        640
Group variable (i): id                       Number of groups   =         52

R-sq:  within  = 0.9954                       Obs per group: min =          5
       between = 0.7637                                      avg =       12.3
       overall = 0.7905                                      max =         13

                                              F(5,583)           =   25138.68
corr(u_i, Xb)  = -0.5607                      Prob > F           =     0.0000

------------------------------------------------------------------------------
     lntrade |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     lngdpij |   .0092619   .0025385     3.65   0.000     .0042763    .0142476
   lnpcgdpij |   .5134966    .017154    29.93   0.000     .4798054    .5471879
    lnpcgdpd |   .0082528   .0082139     1.00   0.315    -.0078796    .0243852
     lntrgdp |   1.029088   .0034856   295.24   0.000     1.022242    1.035934
       lnfdi |   .0119643    .001465     8.17   0.000     .0090871    .0148416
       _cons |   -4.92317    .306301   -16.07   0.000    -5.524758   -4.321582
-------------+----------------------------------------------------------------
     sigma_u |  1.4625775
     sigma_e |   .0763296
         rho |  .99728377   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(51, 583) =    45.46             Prob > F = 0.0000
```

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Result: Trade (Random Effects)

. xtreg lntrade lngdpij lnpcgdpij lndist lnpcgdpd lntrgdp lnfdi ins, re

```
Random-effects GLS regression              Number of obs     =        381
Group variable (i): id                     Number of groups  =         49

R-sq:  within  = 0.9887                     Obs per group: min =          1
       between = 0.9960                                    avg =        7.8
       overall = 0.9950                                    max =         13

Random effects u_i ~ Gaussian               Wald chi2(7)      =   36642.06
corr(u_i, X)      = 0 (assumed)             Prob > chi2       =     0.0000

------------------------------------------------------------------------------
     lntrade |     Coef.    Std. Err.      z    P>|z|    [95% Conf. Interval]
-------------+----------------------------------------------------------------
     lngdpij |  .0057053    .009284      0.61   0.539    -.012491    .0239016
   lnpcgdpij |  .0288364   .0147117      1.96   0.050    1.96e-06    .0576708
       lndist |  .0938321   .0402168      2.33   0.020    .0150086    .1726555
     lnpcgdpd |  .0007332   .0117702      0.06   0.950    -.0223359   .0238024
      lntrgdp |  1.024712   .0062367    164.30   0.000    1.012488    1.036935
        lnfdi |  .0269535   .0029952      9.00   0.000    .0210829     .032824
          ins |  .0500666   .0398309      1.26   0.209    -.0280004   .1281337
        _cons |  3.619561   .4079886      8.87   0.000    2.819918    4.419204
-------------+----------------------------------------------------------------
     sigma_u |  .05674996
     sigma_e |  .05311363
         rho |  .53306235   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

Result: Trade (Pooled LS)

. regress lntrade lngdpij lnpcgdpij lndist lnpcgdpd lntrgdp lnfdi ins

```
      Source |       SS       df       MS              Number of obs =      381
-------------+------------------------------           F(  7,   373) =14545.17
       Model |  2302.4508     7  328.921542            Prob > F      =   0.0000
    Residual |  8.43494951   373  .022613806           R-squared     =   0.9963
-------------+------------------------------           Adj R-squared =   0.9963
       Total |  2310.88574   380  6.08127828           Root MSE      =   .15038

------------------------------------------------------------------------------
     lntrade |     Coef.    Std. Err.      t    P>|t|    [95% Conf. Interval]
-------------+----------------------------------------------------------------
     lngdpij |  -.0336866   .0066145     -5.09   0.000    -.046693    -.0206803
   lnpcgdpij |  .0430456    .0085692      5.02   0.000    .0261955    .0598956
       lndist |  .0286594    .0170002      1.69   0.093    -.0047689   .0620877
     lnpcgdpd |  -.0031015   .0052769     -0.59   0.557    -.0134777   .0072748
      lntrgdp |  1.005513    .004311     233.24   0.000    .9970359    1.01399
        lnfdi |  .0124812    .0027992      4.46   0.000    .006977     .0179855
          ins |  -.0508654   .0277614     -1.83   0.068    -.105454    .0037231
        _cons |  4.938939    .2186851     22.58   0.000    4.508929    5.36895
------------------------------------------------------------------------------
```

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Result: Trade (Hausman Fixed Test)

. hausman fixed

```
               ---- Coefficients ----
            |     (b)          (B)            (b-B)      sqrt(diag(V_b-V_B))
            |    fixed          .           Difference          S.E.
------------+------------------------------------------------------------------
   lngdpij  |   .0092619      .0057053        .0035566             .
 lnpcgdpij  |   .5134966      .0288364        .4846603          .008822
 lnpcgdpd   |   .0082528      .0007332        .0075196             .
  lntrgdp   |   1.029088      1.024712        .0043762             .
    lnfdi   |   .0119643      .0269535       -.0149892             .
------------------------------------------------------------------------------
                      b = consistent under Ho and Ha; obtained from xtreg
           B = inconsistent under Ha, efficient under Ho; obtained from xtreg

     Test:  Ho:  difference in coefficients not systematic

                   chi2(5) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                           =      1155.86
                 Prob>chi2 =       0.0000
                 (V_b-V_B is not positive definite)
```

Result: Trade (Detection for Heteroscedasticity)

. imtest, white

```
White's test for Ho: homoskedasticity
        against Ha: unrestricted heteroskedasticity

        chi2(34)    =     139.55
        Prob > chi2 =     0.0000

Cameron & Trivedi's decomposition of IM-test

---------------------------------------------------
            Source |     chi2     df       p
-------------------+-------------------------------
Heteroskedasticity |    139.55    34     0.0000
          Skewness |     64.80     7     0.0000
          Kurtosis |      0.51     1     0.4755
-------------------+-------------------------------
             Total |    204.85    42     0.0000
---------------------------------------------------
```

Result: Export (Fixed Effects)

```
. xtreg lnexport lnrgdpi lnrgdpj lnrpcgdpi lnrpgdpj lner lninfi lninfj lntrgdp,
fe
```

```
Fixed-effects (within) regression          Number of obs     =        181
Group variable (i): id                     Number of groups  =         16

R-sq:  within  = 0.7661                     Obs per group: min =          4
       between = 0.7308                                    avg =       11.3
       overall = 0.6690                                    max =         13

                                            F(8,157)          =      64.29
corr(u_i, Xb)  = -0.8933                    Prob > F          =     0.0000

------------------------------------------------------------------------------
    lnexport |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     lnrgdpi |   4.563089   1.853983     2.46   0.015     .9011225    8.225055
     lnrgdpj |   1.467834   1.143868     1.28   0.201    -.7915223     3.72719
   lnrpcgdpi |  -3.977198   2.761278    -1.44   0.152    -9.431244    1.476848
    lnrpgdpj |   -2.44847   1.215403    -2.01   0.046    -4.849122   -.0478189
        lner |  -1.286994   .3610592    -3.56   0.000    -2.000155   -.5738339
      lninfi |   .0174546   .0806787     0.22   0.829    -.1419012    .1768104
      lninfj |  -.0211609   .0650441    -0.33   0.745    -.1496352    .1073134
     lntrgdp |   .6579863    .068456     9.61   0.000     .5227728    .7931998
       _cons |   39.63755   17.22478     2.30   0.023     5.615366    73.65974
-------------+----------------------------------------------------------------
     sigma_u |  2.5479705
     sigma_e |   .5925725
         rho |  .94868815   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(15, 157) =     5.00             Prob > F = 0.0000
```

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Result: Export (Random Effects)

```
. xtreg lnexport lnrgdpi lnrgdpj lnrpcgdpi lnrpgdpj lndist lnrpcgdpdij lner
lninfi lninfj lntrgdp insj, re
note: lnrpcgdpdij dropped due to collinearity

Random-effects GLS regression              Number of obs     =        127
Group variable (i): id                     Number of groups  =         16

R-sq:  within  = 0.8201                     Obs per group: min =          3
       between = 0.9047                                    avg =        7.9
       overall = 0.9011                                    max =         13

Random effects u_i ~ Gaussian              Wald chi2(10)     =     648.41
corr(u_i, X)      = 0 (assumed)             Prob > chi2       =     0.0000

------------------------------------------------------------------------------
    lnexport |     Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     lnrgdpi |  5.579635    2.08262     2.68   0.007     1.497776    9.661494
     lnrgdpj |  .2746017   .0684577     4.01   0.000     .1404272    .4087763
   lnrpcgdpi | -5.882137   3.369776    -1.75   0.081    -12.48678    .7225033
    lnrpgdpj | -.4001191   .0905633    -4.42   0.000    -.5776198   -.2226183
      lndist | -.7020302   .3508998    -2.00   0.045    -1.389781   -.0142793
        lner | -.2787309   .3635783    -0.77   0.443    -.9913314    .4338695
      lninfi |  .0588014    .059395     0.99   0.322    -.0576107    .1752136
      lninfj |  .0807034   .0519858     1.55   0.121    -.0211869    .1825937
     lntrgdp |  .5568017   .0452988    12.29   0.000     .4680177    .6455857
        insj |   .095129   .1913334     0.50   0.619    -.2798774    .4701355
       _cons |  38.22293   20.10789     1.90   0.057    -1.187803    77.63366
-------------+----------------------------------------------------------------
     sigma_u |  .29090276
     sigma_e |  .28909807
         rho |  .50311151   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

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Result: Export (Pooled LS)

. regress lnexport lnrgdpi lnrgdpj lnrpcgdpi lnrpgdpj lndist lner lninfi lninfj
lntrgdp insj

```
      Source |       SS       df       MS              Number of obs =     127
-------------+------------------------------          F( 10,   116) =  133.11
       Model |  411.137329    10  41.1137329          Prob > F      =  0.0000
    Residual |  35.8299794   116  .308879132          R-squared     =  0.9198
-------------+------------------------------          Adj R-squared =  0.9129
       Total |  446.967308   126  3.54735959          Root MSE      =  .55577
```

```
------------------------------------------------------------------------------
    lnexport |     Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     lnrgdpi |   6.075856   3.148368     1.93   0.056    -.1598845    12.3116
     lnrgdpj |   .1740419   .0420133     4.14   0.000     .0908292    .2572545
   lnrpcgdpi |  -6.948435   5.122194    -1.36   0.178    -17.09358    3.196715
    lnrpgdpj |  -.3441085   .051452     -6.69   0.000    -.4460156   -.2422014
      lndist |  -.3563888   .2023151    -1.76   0.081    -.7570993    .0443217
        lner |   .3298501   .5397104     0.61   0.542    -.7391143    1.398814
      lninfi |   .0109828   .0908694     0.12   0.904    -.1689956    .1909611
      lninfj |   .2297205   .0590358     3.89   0.000     .1127927    .3466482
     lntrgdp |   .7544636   .0417104    18.09   0.000     .6718509    .8370763
        insj |  -.3203001   .183297     -1.75   0.083     -.683343    .0427428
       _cons |   39.94292   30.53052     1.31   0.193    -20.52662    100.4125
------------------------------------------------------------------------------
```

Result: Export (Hausman Fixed Test)

. hausman fixed

```
                 ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |     fixed          .           Difference          S.E.
-------------+----------------------------------------------------------------
     lnrgdpj |   4.548528     .2742772          4.27425          .7767351
    lnrpgdpj |  -4.671239    -.2815756         -4.389664         1.068617
        lner |  -1.189603    -1.12271          -.066893             .
      lninfi |  -.0193178    -.0123715         -.0069462         .0569539
      lninfj |  -.0185883     .1010865         -.1196748         .0284009
     lntrgdp |   .7161527     .6786517          .037501          .0470216
------------------------------------------------------------------------------
                         b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                 chi2(6) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                         =         70.09
              Prob>chi2 =        0.0000
              (V_b-V_B is not positive definite)
```

Result: Export (Detection for Heteroscedasticity)

```
. imtest, white

White's test for Ho: homoskedasticity
        against Ha: unrestricted heteroskedasticity

        chi2(43)    =      89.21
        Prob > chi2 =     0.0000

Cameron & Trivedi's decomposition of IM-test

---------------------------------------------------
            Source |    chi2    df      p
-------------------+-------------------------------
Heteroskedasticity |   89.21    43   0.0000
          Skewness |   21.90     8   0.0051
          Kurtosis |    1.73     1   0.1881
-------------------+-------------------------------
             Total |  112.84    52   0.0000
---------------------------------------------------
```

Result: Import (Fixed Effects)

```
. xtreg lnimport lnrgdpi lnrgdpj lnrpcgdpi lnrpgdpj lner lninfi lninfj lntrgdp,
fe

Fixed-effects (within) regression          Number of obs      =        181
Group variable (i): id                     Number of groups   =         16

R-sq:  within  = 0.5180                     Obs per group: min =          4
       between = 0.0290                                    avg =       11.3
       overall = 0.0185                                    max =         13

                                           F(8,157)           =      21.09
corr(u_i, Xb)  = -0.8741                    Prob > F           =     0.0000

------------------------------------------------------------------------------
    lnimport |     Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     lnrgdpi | -1.299721   2.794789    -0.47   0.643    -6.819958    4.220516
     lnrgdpj | -2.726968   1.724326    -1.58   0.116    -6.132838    .6789017
   lnrpcgdpi |   2.87371   4.162493     0.69   0.491       -5.348    11.09542
    lnrpgdpj |  3.522165   1.832162     1.92   0.056    -.0967009    7.141031
        lner |  2.959187   .5442794     5.44   0.000     1.884133    4.034242
      lninfi | -.0885076   .1216193    -0.73   0.468    -.3287287    .1517135
      lninfj |  .1363365   .0980508     1.39   0.166    -.0573323    .3300053
     lntrgdp |  .9895723   .1031941     9.59   0.000     .7857444      1.1934
       _cons | -50.97298   25.96552    -1.96   0.051    -102.2598    .3138275
-------------+----------------------------------------------------------------
     sigma_u |  4.8511317
     sigma_e |  .89327439
         rho |  .9672054   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(15, 157) =     10.55              Prob > F = 0.0000
```

Result: Import (Random Effects)

```
. xtreg lnimport lnrgdpi lnrgdpj lnrpcgdpi lnrpgdpj lndist lner lninfi lninfj
lntrgdp insj, re

Random-effects GLS regression              Number of obs     =        127
Group variable (i): id                     Number of groups  =         16

R-sq:  within  = 0.6546                     Obs per group: min =          3
       between = 0.7901                                    avg =        7.9
       overall = 0.7520                                    max =         13

Random effects u_i ~ Gaussian              Wald chi2(10)     =     246.45
corr(u_i, X)       = 0 (assumed)           Prob > chi2       =     0.0000

------------------------------------------------------------------------------
    lnimport |     Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     lnrgdpi | -5.093888   4.749151    -1.07   0.283    -14.40205    4.214276
     lnrgdpj | -.2229646   .1937994    -1.15   0.250    -.6028044    .1568752
   lnrpcgdpi |  7.982864   7.678343     1.04   0.298    -7.066412    23.03214
    lnrpgdpj |  .3358244   .2587524     1.30   0.194     -.171321    .8429699
      lndist | -.5355739   .9813713    -0.55   0.585    -2.459026    1.387878
        lner |  .8221911   .8301003     0.99   0.322    -.8047756    2.449158
      lninfi | -.0994087   .1352153    -0.74   0.462    -.3644259    .1656085
      lninfj | -.0536337   .1210876    -0.44   0.658    -.2909611    .1836937
     lntrgdp |  1.327742   .1076437    12.33   0.000     1.116764    1.538719
        insj |  .0844563   .4502035     0.19   0.851    -.7979263    .9668388
       _cons |  -42.9891   46.04284    -0.93   0.350    -133.2314    47.25322
-------------+----------------------------------------------------------------
     sigma_u |  1.0375892
     sigma_e |  .79213772
         rho |  .63177518   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

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Result: Import (Pooled LS)

```
. regress lnimport lnrgdpi lnrgdpj lnrpcgdpi lnrpgdpj lndist lner lninfi lninfj
lntrgdp insj
```

```
      Source |       SS       df       MS              Number of obs =     127
-------------+------------------------------           F( 10,   116) =   46.59
       Model |  659.006055    10  65.9006055           Prob > F      =  0.0000
    Residual |  164.079811   116  1.41448113           R-squared     =  0.8007
-------------+------------------------------           Adj R-squared =  0.7835
       Total |  823.085866   126  6.53242751           Root MSE      =  1.1893


------------------------------------------------------------------------------
    lnimport |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     lnrgdpi |  -5.539606   6.737361    -0.82   0.413    -18.8838     7.804587
     lnrgdpj |  -.0184108   .0899066    -0.20   0.838    -.1964821    .1596604
   lnrpcgdpi |   8.305252   10.96126     0.76   0.450    -13.40489     30.0154
    lnrpgdpj |   .3174258   .1101048     2.88   0.005     .0993493    .5355023
      lndist |   .1085922   .4329448     0.25   0.802    -.7489095    .9660939
        lner |  -.1585848   1.154955    -0.14   0.891    -2.446119    2.128949
      lninfi |   .0446738   .1944563     0.23   0.819    -.3404715     .429819
      lninfj |  -.4258029   .1263338    -3.37   0.001    -.6760229    -.175583
     lntrgdp |   1.247689   .0892583    13.98   0.000     1.070901    1.424476
        insj |   1.678991   .3922471     4.28   0.000     .9020958    2.455885
       _cons |  -45.98042   65.33388    -0.70   0.483    -175.3824    83.42157
------------------------------------------------------------------------------
```

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```
. xtreg lnimport lnrpgdpj lner lninfi lninfj, fe

Fixed-effects (within) regression            Number of obs      =       181
Group variable (i): id                       Number of groups   =        16

R-sq:  within  = 0.1441                       Obs per group: min =         4
       between = 0.0433                                      avg =      11.3
       overall = 0.0090                                      max =        13

                                             F(4,161)           =      6.78
corr(u_i, Xb)  = -0.9255                      Prob > F           =    0.0000

------------------------------------------------------------------------------
    lnimport |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
    lnrpgdpj |   2.571637   .7935466     3.24   0.001     1.004535    4.13874
        lner |   2.599235   .6945324     3.74   0.000     1.227667    3.970803
      lninfi |   .0494954   .1471746     0.34   0.737    -.2411463     .340137
      lninfj |   .3648003    .125092     2.92   0.004     .1177677     .611833
       _cons |  -40.54908   10.67977    -3.80   0.000    -61.63957   -19.45858
-------------+----------------------------------------------------------------
     sigma_u |  6.2746519
     sigma_e |  1.1754529
         rho |  .96609596   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(15, 161) =    42.04             Prob > F = 0.0000
```

```
. imtest, white

White's test for Ho: homoskedasticity
          against Ha: unrestricted heteroskedasticity

          chi2(19)      =      58.70
          Prob > chi2   =     0.0000

Cameron & Trivedi's decomposition of IM-test

---------------------------------------------------
             Source |     chi2     df       p
--------------------+------------------------------
 Heteroskedasticity |    58.70     19    0.0000
           Skewness |     9.13      5    0.1040
           Kurtosis |     1.12      1    0.2903
--------------------+------------------------------
              Total |    68.95     25    0.0000
---------------------------------------------------
```

Individual Effects(trade)

```
. regress effect dist insj

      Source |       SS       df       MS              Number of obs =      49
-------------+------------------------------           F(  2,    46) =    1.87
       Model |  6.42143368      2  3.21071684          Prob > F      =  0.1657
    Residual |  79.0061515     46  1.71752503          R-squared     =  0.0752
-------------+------------------------------           Adj R-squared =  0.0350
       Total |  85.4275852     48  1.77974136          Root MSE      =  1.3105


------------------------------------------------------------------------------
      effect |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        dist |  -.0666084   .3682611    -0.18   0.857    -.8078796    .6746627
        insj |   1.165723   .6336998     1.84   0.072    -.1098487    2.441294
       _cons |   .3795497   3.303044     0.11   0.909    -6.269132    7.028231
------------------------------------------------------------------------------
```

Individual Effects (export)

```
. regress effect dist insj

      Source |       SS       df       MS              Number of obs =      16
-------------+------------------------------           F(  2,    13) =    3.62
       Model |  288.189511      2  144.094756          Prob > F      =  0.0564
    Residual |  518.050356     13  39.8500274          R-squared     =  0.3574
-------------+------------------------------           Adj R-squared =  0.2586
       Total |  806.239867     15  53.7493245          Root MSE      =  6.3127


------------------------------------------------------------------------------
      effect |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        dist |   10.73451   4.753045     2.26   0.042     .4661802    21.00284
        insj |   9.497327   4.901756     1.94   0.075    -1.092274    20.08693
       _cons |  -99.24679   43.70649    -2.27   0.041    -193.6689   -4.824664
------------------------------------------------------------------------------
```

Individual Effects (Import)

. regress effect dist insj

```
      Source |       SS       df       MS              Number of obs =      16
-------------+------------------------------           F(  2,    13) =    5.00
       Model | 256.701555      2  128.350778           Prob > F      =  0.0245
    Residual | 333.867581     13  25.6821216           R-squared     =  0.4347
-------------+------------------------------           Adj R-squared =  0.3477
       Total | 590.569137     15  39.3712758           Root MSE      =  5.0678


------------------------------------------------------------------------------
      effect |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        dist | -4.929835    3.81569    -1.29   0.219    -13.17313    3.313463
        insj |  9.891652   3.935074     2.51   0.026     1.390442    18.39286
       _cons |  44.05323   35.08706     1.26   0.231    -31.74776    119.8542
------------------------------------------------------------------------------
```

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The OIC Member Countries Trade with Malaysia, Selected Years (USD in Million)

Year/ Country	1997	1999	2001	2003	2006	2009
Afghanistan	9.72	7.53	3.72	1.87	4.23	10.37
Albania	0.45	0.69	0.46	0.44	1.86	3.27
Algeria	19.49	27.4	32.48	76.87	73.7	132.13
Azerbaijan	1.96	0.95	1.05	78.64	6.12	1.66
Bahrain	56.41	81.87	82.89	77.41	195.19	243.33
Bangladesh	196.54	140.74	186.62	335.37	445.03	830.62
Benin	4.59	1.86	4.04	22.36	98.56	301.85
Brunei	297.8	224.88	278.01	349.46	421.09	510.33
Burkina-F.	8.61	5.51	2.73	0.32	0.02	21.15
Cameroon	13.79	7.97	5.93	6.66	65.07	69.53
Chad	0.76	0.08	0	0.07	0.004	0.4
Comoros	0.11	0.48	0.2	0.41	0.87	3.17
Cote d'Ivo.	49.26	27.56	15.04	20.71	140.95	164.06
Djibouti	4.76	6.68	4.61	12.81	33.38	146.6
Egypt	229.78	323.21	219.77	477.92	390.94	844.87
Gabon	5.19	2.09	1.62	0.39	92.77	321.74
Gambia	2.42	0.89	1.82	9.83	18.77	20.92
Guinea	2.27	4.82	3.09	4.202	8.96	13.16
Guinea-B.	0.15	0.13	0	0.152	0.171	2.934
Guyana	0.32	2.36	0.57	0.59	11.04	4.26
Indonesia	2688.96	2987.91	3804.49	5068.16	9025.81	11478.91
Iran	139.11	137.08	327.48	428.37	1022.6	1010
Iraq	19.28	16.79	33.1	12.55	65.82	153.34
Jordan	168.71	104.26	91.48	108.91	208.48	175.28
Kazakhstan	3.75	4.18	3.39	34.79	21.006	26.335
Kuwait	75.13	130.51	129.97	143.76	467.29	452.04
Kyrgyzstan	0.26	0.7	0.33	1.81	1.08	1.85
Lebanon	27.11	22.3	31.1	41.54	42.86	96.11
Libya	23.86	6.18	5.16	21.52	32.02	109.13
Maldives	31.37	22.16	29.17	24.02	67.59	72.67
Mali	2.27	10.37	5.34	0.17	0.98	5.55
Mauritania	3.25	3.74	6.6	16.22	23.98	70.95
Morocco	19.9	23.55	18.01	25.07	82.36	60.47
Mozambique	2.39	2.74	4.85	17.37	25.73	45.08

Country/Year	1997	1999	2001	2003	2006	2009
Niger	1.18	0.61	1.47	4.14	1.47	10.7
Nigeria	17.98	59.36	52.86	92.51	83.09	276.63
Oman	42.37	106.2	455.63	518.78	984.32	329.29
Pakistan	665.3	569.52	443.15	715.95	902.22	1782.24
Palestine	n.a.	n.a.	n.a.	n.a	n.a.	n.a.
Qatar	36.81	32.27	77.12	53.43	266.12	881
S. Arabia	659.39	588.07	977.73	991.84	2860.09	1920.25
Senegal	4.3	2.03	2.5	7.71	10.37	17.25
Sierra L.	1.02	0.89	1.73	2.6	9.88	49.96
Somalia	0.76	4.35	2.65	3.43	6.22	11.364
Sudan	17.48	29.85	19.72	42.6	51.78	142.42
Suriname	0.73	0.53	0.65	0.98	2.53	4.05
Syria	47.25	47.57	51.5	154.68	157.83	175.65
Tajikistan	0.1	0.17	0.05	0.11	0.112	2.06
Togo	15.13	9.13	6.4	36.82	77	109.22
Tunisia	24.05	25.21	23.4	29.37	74.55	58.06
Turkey	461.25	332.96	409.91	361.63	702.62	590.52
Turkmen.	0.36	1.9	0.36	1.98	3.14	205.67
Uganda	6.59	2.01	3.77	3.58	6.78	16.04
U.A.E.	765.96	836.95	997.29	1415.32	3238.67	4590.91
Uzbekistan	12.65	3.79	2.13	4.73	12.35	38.57
Yemen	56.52	86.73	346.07	316.74	314.47	277.52

Source: Direction of Trade Statistics, International Monetary Fund.
Retrieved on 9 April 2011 at http//:www.imfstatistics.org/dot/

Malaysia's Exports to Individual OIC Member Countries,
Selected Years (USD in Million)

Year/ Country	1997	1999	2001	2003	2006	2009
Afghanistan	9.27	6.69	2.35	1.84	4.21	10.34
Albania	0.32	0.26	0.46	0.39	0.76	3
Algeria	12.1	22.83	30.69	75.22	67.02	129.76
Azerbaijan	1.94	0.65	1.04	78.53	6.07	1.63
Bahrain	25.04	26.5	27.12	33.15	54.56	82.92
Bangladesh	186.01	133.48	171.34	320.32	422.22	808.9
Benin	0.63	0.4	3.18	21.83	98.5	297.93
Brunei	273.15	212.85	272.96	317.74	345.56	442.49
Burkina-F.	0.05	0.17	0	0.32	0	0.4
Cameroon	2.36	1.75	3.63	4.87	23.09	25.15
Chad	0	0.08	0	0.06	0.001	0.29
Comoros	0.11	0.18	0.2	0.4	0.87	3.14
Cote d'Ivo.	11.1	8.96	6.36	8.3	11.67	27.53
Djibouti	4.74	6.44	4.58	12.79	32.97	146.59
Egypt	220.29	310.35	209.92	454.66	342	808.54
Gabon	3.56	0.59	0.78	0.37	7.1	10.82
Gambia	0.25	0.15	0.86	8.85	17.19	20.68
Guinea	2.26	1.7	3.03	3.2	8.85	11.92
Guinea-B.	0.15	0.13	0	0.15	0.17	2.93
Guyana	0.09	2.24	0.31	0.55	10.66	3.64
Indonesia	1224.87	1231.27	1563.11	2129.15	4074.02	4920.69
Iran	106.97	88.67	178.35	328.22	441.39	685.46
Iraq	19.28	16.79	33.03	12.52	27.67	153.26
Jordan	137.07	68.84	66.45	79.2	150.18	150.81
Kazakhstan	2.79	4.01	1.81	30.14	21	26.2
Kuwait	65.76	70.41	63.29	89.78	159.94	161.97
Kyrgyzstan	0.05	0.04	0.23	0.23	0.99	1.76
Lebanon	26.43	21.86	30.76	40.86	39.05	95.23
Libya	11.98	2.87	3.86	20.65	32.01	85.7
Maldives	31.25	21.96	28.89	21.76	67.17	72.28
Mali	0.13	0.25	1.4	0.15	0.55	0.51
Mauritania	3.21	3.66	6.38	14.16	23.91	70.62
Morocco	18.78	17.1	15.69	18.32	48.52	43
Mozambique	2.38	2.73	4.66	17.32	23.8	42.29

Year/ Country	1997	1999	2001	2003	2006	2009
Niger	0.93	0.46	0.59	4.06	1.45	10.63
Nigeria	14.45	52.51	48.6	90.75	62.99	242.92
Oman	38.44	36.69	96.74	52.36	99.81	172.54
Pakistan	625.12	522.48	399.27	670.85	842.87	1631.87
Palestine	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Qatar	17.23	13.59	29.48	39.31	186.41	549.77
S. Arabia	299.19	300.6	341.24	408.71	530.31	812.4
Senegal	2.47	1.94	1.15	7.67	9.97	14.15
Sierra L.	0.27	0.57	1.53	2.12	9.71	48.43
Somalia	0.7	3.8	2.62	3.42	6.22	11.36
Sudan	17.25	29.76	19.49	41.39	51.55	39.62
Suriname	0.62	0.4	0.38	0.92	2.52	3.98
Syria	44.55	46.79	50.65	154.27	156.15	174.26
Tajikistan	0.08	0.16	0.02	0.06	0.11	1.29
Togo	0.28	0.24	4.78	35.24	71.93	107.25
Tunisia	8.8	10.42	11.98	21.57	61.35	48.25
Turkey	284.31	284.1	366.93	318.3	639.74	477.22
Turkmen.	0.03	1.89	0.35	0.39	2.52	205.66
Uganda	5.3	0.84	2.41	2.55	6.43	10.97
U.A.E.	662.42	720.33	833.45	1115.55	2269.74	2849.84
Uzbekistan	11.93	1.54	2.01	2.21	12.3	37.37
Yemen	56.51	86.69	50.82	104.59	262.39	203.86

Source: Direction of Trade Statistics, International Monetary Fund. Retrieved on
9 April 2011 at http//:www.imfstatistics.org/dot/

Malaysia's Imports from Individual OIC Member Countries,
Selected Years (USD in Million)

Year/Country	1997	1999	2001	2003	2006	2009
Afghanistan	0.45	0.84	1.37	0.03	0.02	0.03
Albania	0.13	0.43	0	0.05	1.1	0.27
Algeria	7.39	4.57	1.79	1.65	6.68	2.37
Azerbaijan	0.02	0.3	0.01	0.11	0.05	0.03
Bahrain	31.37	55.37	55.77	44.26	140.63	160.41
Bangladesh	10.53	7.26	15.28	15.05	22.81	21.72
Benin	3.96	1.46	0.86	0.53	0.06	3.92
Brunei	24.65	12.03	5.05	31.72	75.53	67.84
Burkina-F.	8.56	5.34	2.73	0	0.02	20.75
Cameroon	11.43	6.22	2.3	1.79	41.98	44.38
Chad	0.76	0	0	0.01	0.003	0.11
Comoros	0	0.3	0	0.01	0	0.03
Cote d'Ivo.	38.16	18.6	8.68	12.41	129.28	136.53
Djibouti	0.02	0.24	0.03	0.02	0.41	0.01
Egypt	9.49	12.86	9.85	23.26	48.94	36.33
Gabon	1.63	1.5	0.84	0.02	85.67	310.92
Gambia	2.17	0.74	0.96	0.98	1.58	0.24
Guinea	0.01	3.12	0.06	1.002	0.11	1.24
Guinea-B.	0	0	0	0.002	0.001	0.004
Guyana	0.23	0.12	0.26	0.04	0.38	0.62
Indonesia	1464.09	1756.64	2241.38	2939.01	4951.79	6558.22
Iran	32.14	48.41	149.13	100.15	581.21	324.54
Iraq	0	0	0.07	0.03	38.15	0.08
Jordan	31.64	35.42	25.03	29.71	58.3	24.47
Kazakhstan	0.96	0.17	1.58	4.65	0.006	0.135
Kuwait	9.37	60.1	66.68	53.98	307.35	290.07
Kyrgyzstan	0.21	0.66	0.1	1.58	0.09	0.09
Lebanon	0.68	0.44	0.34	0.68	3.81	0.88
Libya	11.88	3.31	1.3	0.87	0.01	23.43
Maldives	0.12	0.2	0.28	2.26	0.42	0.39
Mali	2.14	10.12	3.94	0.02	0.43	5.04
Mauritania	0.04	0.08	0.22	2.06	0.07	0.33
Morocco	1.12	6.45	2.32	6.75	33.84	17.47
Mozambique	0.01	0.01	0.19	0.05	1.93	2.79

Year/ Country	1997	1999	2001	2003	2006	2009
Niger	0.25	0.15	0.88	0.08	0.02	0.07
Nigeria	3.53	6.85	4.26	1.76	20.1	33.71
Oman	3.93	69.51	358.89	466.42	884.51	156.75
Pakistan	40.18	47.04	43.88	45.1	59.35	150.37
Palestine	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Qatar	19.58	18.68	47.64	14.12	79.71	331.23
S. Arabia	360.2	287.47	636.49	583.13	2329.78	1107.85
Senegal	1.83	0.09	1.35	0.04	0.4	3.1
Sierra L.	0.75	0.32	0.2	0.48	0.17	1.53
Somalia	0.06	0.55	0.03	0.01	0	0.004
Sudan	0.23	0.09	0.23	1.21	0.23	102.8
Suriname	0.11	0.13	0.27	0.06	0.01	0.07
Syria	2.7	0.78	0.85	0.41	1.68	1.39
Tajikistan	0.02	0.01	0.03	0.05	0.002	0.77
Togo	14.85	8.89	1.62	1.58	5.07	1.97
Tunisia	15.25	14.79	11.42	7.8	13.2	9.81
Turkey	176.94	48.86	42.98	43.33	62.88	113.3
Turkmen.	0.33	0.01	0.01	1.59	0.62	0.01
Uganda	1.29	1.17	1.36	1.03	0.35	5.07
U.A.E.	103.54	116.62	163.84	299.77	968.93	1741.07
Uzbekistan	0.72	2.25	0.12	2.52	0.05	1.2
Yemen	0.01	0.04	295.25	212.15	52.08	73.66

Source: Direction of Trade Statistics, International Monetary Fund. Retrieved on
9 April 2011 at http//:www.imfstatistics.org/dot/

Malaysia-OIC Trade, Exports, and Imports from 1997 to 2009
(USD in Million)

Country	Year	Export	Import	Trade
Afghanistan	1997	9.27	0.45	9.72
	1998	10.09	0.21	10.3
	1999	6.69	0.84	7.53
	2000	2.85	0.81	3.66
	2001	2.35	1.37	3.72
	2002	2.31	0.02	2.33
	2003	1.84	0.03	1.87
	2004	3.43	0.35	3.78
	2005	5.43	0.05	5.48
	2006	4.21	0.02	4.23
	2007	4.05	0.01	4.06
	2008	4.72	0.02	4.74
	2009	10.34	0.03	10.37
Albania	1997	0.32	0.13	0.45
	1998	0.2	0	0.2
	1999	0.26	0.43	0.69
	2000	0.71	0.01	0.72
	2001	0.46	0	0.46
	2002	0.17	0.02	0.19
	2003	0.39	0.05	0.44
	2004	1.57	0.12	1.69
	2005	0.28	0.04	0.32
	2006	0.76	1.1	1.86
	2007	0.66	1.54	2.2
	2008	2.09	2.04	4.13
	2009	3	0.27	3.27
Algeria	1997	12.1	7.39	19.49
	1998	12.33	2.84	15.17
	1999	22.83	4.57	27.4
	2000	19.69	5.27	24.96
	2001	30.69	1.79	32.48
	2002	113.68	2.47	116.15
	2003	75.22	1.65	76.87

Country	Year	Export	Import	Trade
	2004	91	0.14	91.14
	2005	51.2	0.89	52.09
	2006	67.02	6.68	73.7
	2007	113.36	5.8	119.16
	2008	137.72	6.77	144.49
	2009	129.76	2.37	132.13
Azerbajian	1997	1.94	0.02	1.96
	1998	16.66	0.01	16.67
	1999	0.65	0.3	0.95
	2000	0.64	1.34	1.98
	2001	1.04	0.01	1.05
	2002	1.66	0.01	1.67
	2003	78.53	0.11	78.64
	2004	104.27	0.05	104.32
	2005	2.31	0.01	2.32
	2006	6.07	0.05	6.12
	2007	1.75	0.33	2.08
	2008	1.76	0.02	1.78
	2009	1.63	0.03	1.66
Bahrain	1997	25.04	31.37	56.41
	1998	34.71	19.56	54.27
	1999	26.5	55.37	81.87
	2000	29.77	53.27	83.04
	2001	27.12	55.77	82.89
	2002	32.12	38.61	70.73
	2003	33.15	44.26	77.41
	2004	34.64	78.23	112.87
	2005	41.69	108.16	149.85
	2006	54.56	140.63	195.19
	2007	61.4	122.88	184.28
	2008	84.37	132.83	217.2
	2009	82.92	160.41	243.33
Bangladesh	1997	186.01	10.53	196.54
	1998	180.16	6.34	186.5
	1999	133.48	7.26	140.74
	2000	153.62	14.99	168.61
	2001	171.34	15.28	186.62
	2002	225.85	20.62	246.47
	2003	320.32	15.05	335.37
	2004	364.22	17.04	381.26

Country	Year	Export	Import	Trade
	2005	409.37	21.83	431.2
	2006	422.22	22.81	445.03
	2007	406.65	32.32	438.97
	2008	684.94	58.76	743.7
	2009	808.9	21.72	830.62
Benin	1997	0.63	3.96	4.59
	1998	0.4	1.57	1.97
	1999	0.4	1.46	1.86
	2000	1.68	0.77	2.45
	2001	3.18	0.86	4.04
	2002	3.64	0.26	3.9
	2003	21.83	0.53	22.36
	2004	11.85	1.75	13.6
	2005	26.45	0.91	27.36
	2006	98.5	0.06	98.56
	2007	210.77	2.01	212.78
	2008	395.2	12.56	407.76
	2009	297.93	3.92	301.85
Brunei	1997	273.15	24.65	297.8
	1998	232.61	3.64	236.25
	1999	212.85	12.03	224.88
	2000	254	3.73	257.73
	2001	272.96	5.05	278.01
	2002	256.84	3.68	260.52
	2003	317.74	31.72	349.46
	2004	316.54	14.19	330.73
	2005	353.27	12.96	366.23
	2006	345.56	75.53	421.09
	2007	402.42	95.76	498.18
	2008	449.32	101.96	551.28
	2009	442.49	67.84	510.33
Burkina Faso	1997	0.05	8.56	8.61
	1998	0.17	4.91	5.08
	1999	0.17	5.34	5.51
	2000	0.28	1.91	2.19
	2001	0	2.73	2.73
	2002	1.39	0.99	2.38
	2003	0.32	0	0.32
	2004	0.045	0	0.045
	2005	0.05	0.06	0.11

Country	Year	Export	Import	Trade
	2006	0	0.02	0.02
	2007	0.63	0.61	1.24
	2008	0.05	4.74	4.79
	2009	0.4	20.75	21.15
Cameroon	1997	2.36	11.43	13.79
	1998	2.65	7.64	10.29
	1999	1.75	6.22	7.97
	2000	1.54	1.76	3.3
	2001	3.63	2.3	5.93
	2002	7.49	0.76	8.25
	2003	4.87	1.79	6.66
	2004	6.61	44.53	51.14
	2005	9.23	29.55	38.78
	2006	23.09	41.98	65.07
	2007	35.52	20.69	56.21
	2008	53.47	38.35	91.82
	2009	25.15	44.38	69.53
Chad	1997	0	0.76	0.76
	1998	0	0.34	0.34
	1999	0.08	0	0.08
	2000	0.06	0	0.06
	2001	0	0	0
	2002	0.01	0	0.01
	2003	0.06	0.01	0.07
	2004	0.05	0.18	0.23
	2005	0.04	0.13	0.17
	2006	0.001	0.003	0.004
	2007	0.44	0.44	0.88
	2008	0.15	0.001	0.151
	2009	0.29	0.11	0.4
Comoros	1997	0.11	0	0.11
	1998	0.01	0	0.01
	1999	0.18	0.3	0.48
	2000	0.19	0.06	0.25
	2001	0.2	0	0.2
	2002	0.29	0.01	0.3
	2003	0.4	0.01	0.41
	2004	0.38	0	0.38
	2005	0.65	0.02	0.67
	2006	0.87	0	0.87

Country	Year	Export	Import	Trade
	2007	1.62	0.11	1.73
	2008	3.76	0.02	3.78
	2009	3.14	0.03	3.17
Cote D'ivoire	1997	11.1	38.16	49.26
	1998	8.48	36.07	44.55
	1999	8.96	18.6	27.56
	2000	9.05	13.9	22.95
	2001	6.36	8.68	15.04
	2002	6.25	2.77	9.02
	2003	8.3	12.41	20.71
	2004	5.83	41.38	47.21
	2005	5.97	48.5	54.47
	2006	11.67	129.28	140.95
	2007	16.27	79.5	95.77
	2008	24.66	69	93.66
	2009	27.53	136.53	164.06
Djibouti	1997	4.74	0.02	4.76
	1998	3.23	0.14	3.37
	1999	6.44	0.24	6.68
	2000	5.18	0.17	5.35
	2001	4.58	0.03	4.61
	2002	5.04	0.02	5.06
	2003	12.79	0.02	12.81
	2004	13.38	0.002	13.382
	2005	21.81	0.01	21.82
	2006	32.97	0.41	33.38
	2007	79.31	2.16	81.47
	2008	140.66	1.7	142.36
	2009	146.59	0.01	146.6
Egypt	1997	220.29	9.49	229.78
	1998	300.83	7.21	308.04
	1999	310.35	12.86	323.21
	2000	224.88	15.56	240.44
	2001	209.92	9.85	219.77
	2002	295.54	16.02	311.56
	2003	454.66	23.26	477.92
	2004	365.42	30.82	396.24
	2005	457.09	36.88	493.97
	2006	342	48.94	390.94
	2007	476.91	85.55	562.46

Country	Year	Export	Import	Trade
	2008	711.23	107.92	819.15
	2009	808.54	36.33	844.87
Gabon	1997	3.56	1.63	5.19
	1998	0.68	0.01	0.69
	1999	0.59	1.5	2.09
	2000	0.81	0.07	0.88
	2001	0.78	0.84	1.62
	2002	0.99	0.67	1.66
	2003	0.37	0.02	0.39
	2004	1.25	0.03	1.28
	2005	4.62	0.95	5.57
	2006	7.1	85.67	92.77
	2007	7.5	414.17	421.67
	2008	17.2	167.55	184.75
	2009	10.82	310.92	321.74
Gambia	1997	0.25	2.17	2.42
	1998	0.2	0.98	1.18
	1999	0.15	0.74	0.89
	2000	0.44	0.95	1.39
	2001	0.86	0.96	1.82
	2002	3.57	3.65	7.22
	2003	8.85	0.98	9.83
	2004	15.07	1.66	16.73
	2005	15.85	0.24	16.09
	2006	17.19	1.58	18.77
	2007	30.38	0.17	30.55
	2008	30.49	0.08	30.57
	2009	20.68	0.24	20.92
Guinea	1997	2.26	0.01	2.27
	1998	2.7	2.14	4.84
	1999	1.7	3.12	4.82
	2000	1.94	1.03	2.97
	2001	3.03	0.06	3.09
	2002	0.93	0.04	0.97
	2003	3.2	1.002	4.202
	2004	5.07	0.27	5.34
	2005	3.34	0.24	3.58
	2006	8.85	0.11	8.96
	2007	13.56	1.99	15.55
	2008	13.85	8.04	21.89

Country	Year	Export	Import	Trade
	2009	11.92	1.24	13.16
Guinea-Bissau	1997	0.15	0	0.15
	1998	0	0	0
	1999	0.13	0	0.13
	2000	0	0	0
	2001	0	0	0
	2002	0	0.03	0.03
	2003	0.15	0.002	0.152
	2004	0.02	0	0.02
	2005	0	0	0
	2006	0.17	0.001	0.171
	2007	1.64	0.05	1.69
	2008	3.62	0.47	4.09
	2009	2.93	0.004	2.934
Guyana	1997	0.09	0.23	0.32
	1998	1.71	0.05	1.76
	1999	2.24	0.12	2.36
	2000	0.33	0.08	0.41
	2001	0.31	0.26	0.57
	2002	1.38	0.18	1.56
	2003	0.55	0.04	0.59
	2004	1.25	0.35	1.6
	2005	7.12	0.39	7.51
	2006	10.66	0.38	11.04
	2007	4.5	0.66	5.16
	2008	5.5	0.59	6.09
	2009	3.64	0.62	4.26
Indonesia	1997	1224.87	1464.09	2688.96
	1998	1009.35	1477.14	2486.49
	1999	1231.27	1756.64	2987.91
	2000	1707.48	2268.77	3976.25
	2001	1563.11	2241.38	3804.49
	2002	1801.51	2550.74	4352.25
	2003	2129.15	2939.01	5068.16
	2004	3072.94	4193.73	7266.67
	2005	3322.33	4375.26	7697.59
	2006	4074.02	4951.79	9025.81
	2007	5171.3	6233.28	11404.58
	2008	6243.07	7269.47	13512.54
	2009	4920.69	6558.22	11478.91

Country	Year	Export	Import	Trade
Iran	1997	106.97	32.14	139.11
	1998	81.59	54.85	136.44
	1999	88.67	48.41	137.08
	2000	129.88	104.26	234.14
	2001	178.35	149.13	327.48
	2002	229.47	130.35	359.82
	2003	328.22	100.15	428.37
	2004	345.87	258.49	604.36
	2005	358.78	347.97	706.75
	2006	441.39	581.21	1022.6
	2007	617.7	427.77	1045.47
	2008	734.04	761.71	1495.75
	2009	685.46	324.54	1010
Iraq	1997	19.28	0	19.28
	1998	30.54	0	30.54
	1999	16.79	0	16.79
	2000	20.13	0	20.13
	2001	33.03	0.07	33.1
	2002	74.28	0	74.28
	2003	12.52	0.03	12.55
	2004	60.34	155.47	215.81
	2005	23.56	29.97	53.53
	2006	27.67	38.15	65.82
	2007	20.46	47.12	67.58
	2008	204.46	0.15	204.61
	2009	153.26	0.08	153.34
Jordan	1997	137.07	31.64	168.71
	1998	81.87	20.84	102.71
	1999	68.84	35.42	104.26
	2000	64.31	30	94.31
	2001	66.45	25.03	91.48
	2002	62.74	27.69	90.43
	2003	79.2	29.71	108.91
	2004	343.65	44.46	388.11
	2005	113.77	26.44	140.21
	2006	150.18	58.3	208.48
	2007	87.35	67.48	154.83
	2008	559.55	135.6	695.15
	2009	150.81	24.47	175.28
Kazakhstan	1997	2.79	0.96	3.75

Country	Year	Export	Import	Trade
	1998	2.76	0.28	3.04
	1999	4.01	0.17	4.18
	2000	1.56	1.5	3.06
	2001	1.81	1.58	3.39
	2002	2.74	11.21	13.95
	2003	30.14	4.65	34.79
	2004	10.05	6.4	16.45
	2005	48.21	10.13	58.34
	2006	21	0.006	21.006
	2007	18.04	0.04	18.08
	2008	26.18	1.13	27.31
	2009	26.2	0.135	26.335
Kuwait	1997	65.76	9.37	75.13
	1998	61.19	28.56	89.75
	1999	70.41	60.1	130.51
	2000	68.74	62.78	131.52
	2001	63.29	66.68	129.97
	2002	71	46.34	117.34
	2003	89.78	53.98	143.76
	2004	107.95	67.5	175.45
	2005	122.16	272.16	394.32
	2006	159.94	307.35	467.29
	2007	168.18	601.69	769.87
	2008	376.52	511.35	887.87
	2009	161.97	290.07	452.04
Kyrgyzstan	1997	0.05	0.21	0.26
	1998	0.1	0.4	0.5
	1999	0.04	0.66	0.7
	2000	0.12	0.32	0.44
	2001	0.23	0.1	0.33
	2002	0.22	3.81	4.03
	2003	0.23	1.58	1.81
	2004	0.365	0.3	0.665
	2005	0.83	0.41	1.24
	2006	0.99	0.09	1.08
	2007	2.42	0.23	2.65
	2008	2.17	0.2	2.37
	2009	1.76	0.09	1.85
Lebanon	1997	26.43	0.68	27.11
	1998	25.33	0.8	26.13

Country	Year	Export	Import	Trade
	1999	21.86	0.44	22.3
	2000	23.35	1.63	24.98
	2001	30.76	0.34	31.1
	2002	31.84	0.34	32.18
	2003	40.86	0.68	41.54
	2004	44.17	2.6	46.77
	2005	43.88	2.06	45.94
	2006	39.05	3.81	42.86
	2007	61.68	7.43	69.11
	2008	92.66	2.25	94.91
	2009	95.23	0.88	96.11
Libya	1997	11.98	11.88	23.86
	1998	4.59	3.75	8.34
	1999	2.87	3.31	6.18
	2000	4.44	15.99	20.43
	2001	3.86	1.3	5.16
	2002	9.4	0	9.4
	2003	20.65	0.87	21.52
	2004	30.78	6.25	37.03
	2005	16.17	11.27	27.44
	2006	32.01	0.01	32.02
	2007	75.5	24.004	99.504
	2008	102.49	6.89	109.38
	2009	85.7	23.43	109.13
Maldives	1997	31.25	0.12	31.37
	1998	27.22	0.26	27.48
	1999	21.96	0.2	22.16
	2000	56.91	0.32	57.23
	2001	28.89	0.28	29.17
	2002	19.73	0.21	19.94
	2003	21.76	2.26	24.02
	2004	36.38	0.15	36.53
	2005	53.66	0.42	54.08
	2006	67.17	0.42	67.59
	2007	112.41	0.27	112.68
	2008	121.75	2.21	123.96
	2009	72.28	0.39	72.67
Mali	1997	0.13	2.14	2.27
	1998	0.57	4.96	5.53
	1999	0.25	10.12	10.37

Country	Year	Export	Import	Trade
	2000	0.34	5.38	5.72
	2001	1.4	3.94	5.34
	2002	3.08	1.22	4.3
	2003	0.15	0.02	0.17
	2004	0.73	0.37	1.1
	2005	0.91	0.25	1.16
	2006	0.55	0.43	0.98
	2007	0.45	1.59	2.04
	2008	1.75	3.41	5.16
	2009	0.51	5.04	5.55
Mauritania	1997	3.21	0.04	3.25
	1998	0.89	0.15	1.04
	1999	3.66	0.08	3.74
	2000	3.28	0.16	3.44
	2001	6.38	0.22	6.6
	2002	2.87	0.47	3.34
	2003	14.16	2.06	16.22
	2004	21.99	2.78	24.77
	2005	12.83	1.28	14.11
	2006	23.91	0.07	23.98
	2007	42.33	0.02	42.35
	2008	76.73	0.28	77.01
	2009	70.62	0.33	70.95
Morocco	1997	18.78	1.12	19.9
	1998	18.72	4.5	23.22
	1999	17.1	6.45	23.55
	2000	16.42	6.29	22.71
	2001	15.69	2.32	18.01
	2002	14.59	3.28	17.87
	2003	18.32	6.75	25.07
	2004	27.26	6.78	34.04
	2005	34.15	15.18	49.33
	2006	48.52	33.84	82.36
	2007	58.77	25.21	83.98
	2008	54.85	15.58	70.43
	2009	43.00	17.47	60.47
Mozambique	1997	2.38	0.01	2.39
	1998	6.34	0.83	7.17
	1999	2.73	0.01	2.74
	2000	4.17	0.02	4.19

Country	Year	Export	Import	Trade
	2001	4.66	0.19	4.85
	2002	61.58	1.22	62.8
	2003	17.32	0.05	17.37
	2004	16.02	0.09	16.11
	2005	15.21	0.73	15.94
	2006	23.8	1.93	25.73
	2007	35.41	1.53	36.94
	2008	65.14	9.76	74.9
	2009	42.29	2.79	45.08
Niger	1997	0.93	0.25	1.18
	1998	0.23	0.19	0.42
	1999	0.46	0.15	0.61
	2000	0.6	0.11	0.71
	2001	0.59	0.88	1.47
	2002	0.56	0.74	1.3
	2003	4.06	0.08	4.14
	2004	6.68	0.23	6.91
	2005	2.52	0.09	2.61
	2006	1.45	0.02	1.47
	2007	4.48	0.16	4.64
	2008	13.94	0.09	14.03
	2009	10.63	0.07	10.7
Nigeria	1997	14.45	3.53	17.98
	1998	24.86	2.04	26.9
	1999	52.51	6.85	59.36
	2000	49.07	7.86	56.93
	2001	48.6	4.26	52.86
	2002	78.87	3.08	81.95
	2003	90.75	1.76	92.51
	2004	54.99	4.22	59.21
	2005	185.02	13.53	198.55
	2006	62.99	20.1	83.09
	2007	98.51	25.1	123.61
	2008	141.1	39.86	180.96
	2009	242.92	33.71	276.63
Oman	1997	38.44	3.93	42.37
	1998	41.11	0.4	41.51
	1999	36.69	69.51	106.2
	2000	44.35	372.49	416.84
	2001	96.74	358.89	455.63

Country	Year	Export	Import	Trade
	2002	49.55	284.47	334.02
	2003	52.36	466.42	518.78
	2004	71.45	397.39	468.84
	2005	81.01	509.99	591
	2006	99.81	884.51	984.32
	2007	151.6	468.49	620.09
	2008	230.51	871.51	1102.02
	2009	172.54	156.75	329.29
Pakistan	1997	625.12	40.18	665.3
	1998	750.69	29.52	780.21
	1999	522.48	47.04	569.52
	2000	393.59	53.18	446.77
	2001	399.27	43.88	443.15
	2002	524.42	54.84	579.26
	2003	670.85	45.1	715.95
	2004	701.3	54.21	755.51
	2005	740.63	56.55	797.18
	2006	842.87	59.35	902.22
	2007	1257.2	83.26	1340.46
	2008	1732.34	127.4	1859.74
	2009	1631.87	150.37	1782.24
Qatar	1997	17.23	19.58	36.81
	1998	32.36	7.36	39.72
	1999	13.59	18.68	32.27
	2000	20.18	45.77	65.95
	2001	29.48	47.64	77.12
	2002	39.5	16.62	56.12
	2003	39.31	14.12	53.43
	2004	50.3	20.25	70.55
	2005	95.95	54.03	149.98
	2006	186.41	79.71	266.12
	2007	292.2	23.69	315.89
	2008	241.2	267.39	508.59
	2009	549.77	331.23	881
Saudi Arabia	1997	299.19	360.2	659.39
	1998	279.86	230.81	510.67
	1999	300.6	287.47	588.07
	2000	322.95	633.27	956.22
	2001	341.24	636.49	977.73
	2002	383.28	398.06	781.34

Country	Year	Export	Import	Trade
	2003	408.71	583.13	991.84
	2004	481.76	985.19	1466.95
	2005	473.17	1547.76	2020.93
	2006	530.31	2329.78	2860.09
	2007	716.05	1976.55	2692.6
	2008	1054.03	2271.83	3325.86
	2009	812.4	1107.85	1920.25
Senegal	1997	2.47	1.83	4.3
	1998	0.65	0.4	1.05
	1999	1.94	0.09	2.03
	2000	1.79	0.01	1.8
	2001	1.15	1.35	2.5
	2002	1.7	0.04	1.74
	2003	7.67	0.04	7.71
	2004	8.15	0.03	8.18
	2005	16.1	0.38	16.48
	2006	9.97	0.4	10.37
	2007	14.98	0.64	15.62
	2008	14.54	1.62	16.16
	2009	14.15	3.1	17.25
Sierra Leone	1997	0.27	0.75	1.02
	1998	0.33	0.52	0.85
	1999	0.57	0.32	0.89
	2000	1.84	0.26	2.1
	2001	1.53	0.2	1.73
	2002	1.51	0.29	1.8
	2003	2.12	0.48	2.6
	2004	6.34	0.34	6.68
	2005	5.67	0.18	5.85
	2006	9.71	0.17	9.88
	2007	20.02	0.1	20.12
	2008	27.25	0.35	27.6
	2009	48.43	1.53	49.96
Somalia	1997	0.7	0.06	0.76
	1998	1.83	0	1.83
	1999	3.8	0.55	4.35
	2000	3.8	0	3.8
	2001	2.62	0.03	2.65
	2002	3.42	0.04	3.46
	2003	3.42	0.01	3.43

Country	Year	Export	Import	Trade
	2004	4.21	0.02	4.23
	2005	7.27	2.68	9.95
	2006	6.22	0	6.22
	2007	15.41	0	15.41
	2008	26.19	0.14	26.33
	2009	11.36	0.004	11.364
Sudan	1997	17.25	0.23	17.48
	1998	16.77	0.06	16.83
	1999	29.76	0.09	29.85
	2000	16.16	1.23	17.39
	2001	19.49	0.23	19.72
	2002	17.92	0.17	18.09
	2003	41.39	1.21	42.6
	2004	39.18	0.39	39.57
	2005	128.08	0.13	128.21
	2006	51.55	0.23	51.78
	2007	52.93	41.96	94.89
	2008	52.91	52.04	104.95
	2009	39.62	102.8	142.42
Suriname	1997	0.62	0.11	0.73
	1998	0.3	0.35	0.65
	1999	0.4	0.13	0.53
	2000	0.24	0.45	0.69
	2001	0.38	0.27	0.65
	2002	0.39	0.3	0.69
	2003	0.92	0.06	0.98
	2004	1.29	0.05	1.34
	2005	1.43	0.01	1.44
	2006	2.52	0.01	2.53
	2007	3.25	0.03	3.28
	2008	5.26	0.02	5.28
	2009	3.98	0.07	4.05
Syria	1997	44.55	2.7	47.25
	1998	42.65	0.85	43.5
	1999	46.79	0.78	47.57
	2000	64.65	2.93	67.58
	2001	50.65	0.85	51.5
	2002	66.51	0.96	67.47
	2003	154.27	0.41	154.68
	2004	149.11	0.46	149.57

Country	Year	Export	Import	Trade
	2005	164.26	1.5	165.76
	2006	156.15	1.68	157.83
	2007	166.36	1.7	168.06
	2008	173.68	1.06	174.74
	2009	174.26	1.39	175.65
Tajikistan	1997	0.08	0.02	0.1
	1998	0.5	0	0.5
	1999	0.16	0.01	0.17
	2000	0.06	0.08	0.14
	2001	0.02	0.03	0.05
	2002	0.05	0.01	0.06
	2003	0.06	0.05	0.11
	2004	0.27	1.15	1.42
	2005	0.25	0.001	0.251
	2006	0.11	0.002	0.112
	2007	1.01	0.01	1.02
	2008	0.5	0	0.5
	2009	1.29	0.77	2.06
Togo	1997	0.28	14.85	15.13
	1998	0.11	18.25	18.36
	1999	0.24	8.89	9.13
	2000	6.26	2.74	9
	2001	4.78	1.62	6.4
	2002	16.24	0.83	17.07
	2003	35.24	1.58	36.82
	2004	58.48	2.53	61.01
	2005	50.39	1.43	51.82
	2006	71.93	5.07	77
	2007	93.92	9.41	103.33
	2008	136.49	30.32	166.81
	2009	107.25	1.97	109.22
Tunisia	1997	8.8	15.25	24.05
	1998	13.18	14.37	27.55
	1999	10.42	14.79	25.21
	2000	8.93	10.75	19.68
	2001	11.98	11.42	23.4
	2002	12.95	3.35	16.3
	2003	21.57	7.8	29.37
	2004	33.32	6.48	39.8
	2005	39.16	4.15	43.31

Country	Year	Export	Import	Trade
	2006	61.35	13.2	74.55
	2007	25.52	20.03	45.55
	2008	32.43	6.09	38.52
	2009	48.25	9.81	58.06
Turkey	1997	284.31	176.94	461.25
	1998	300.71	46.12	346.83
	1999	284.1	48.86	332.96
	2000	200.19	43.59	243.78
	2001	366.93	42.98	409.91
	2002	211.08	58.67	269.75
	2003	318.3	43.33	361.63
	2004	397.83	55.46	453.29
	2005	534.36	71.17	605.53
	2006	639.74	62.88	702.62
	2007	906.83	92.75	999.58
	2008	825.12	139.63	964.75
	2009	477.22	113.3	590.52
Turkmenistan	1997	0.03	0.33	0.36
	1998	6.43	0	6.43
	1999	1.89	0.01	1.9
	2000	0.24	1.31	1.55
	2001	0.35	0.01	0.36
	2002	0.12	0.01	0.13
	2003	0.39	1.59	1.98
	2004	0.64	0.38	1.02
	2005	1.2	0.38	1.58
	2006	2.52	0.62	3.14
	2007	5.45	0.51	5.96
	2008	47.71	0.24	47.95
	2009	205.66	0.01	205.67
Uganda	1997	5.3	1.29	6.59
	1998	1.83	1.9	3.73
	1999	0.84	1.17	2.01
	2000	0.61	1.74	2.35
	2001	2.41	1.36	3.77
	2002	1.71	0.7	2.41
	2003	2.55	1.03	3.58
	2004	5.74	0.47	6.21
	2005	4.5	0.18	4.68
	2006	6.43	0.35	6.78

Country	Year	Export	Import	Trade
	2007	8.35	1.98	10.33
	2008	12.34	0.57	12.91
	2009	10.97	5.07	16.04
United Arab Emirates	1997	662.42	103.54	765.96
	1998	643.1	145.43	788.53
	1999	720.33	116.62	836.95
	2000	859.12	301.18	1160.3
	2001	833.45	163.84	997.29
	2002	858.46	141.08	999.54
	2003	1115.55	299.77	1415.32
	2004	1553.45	451.74	2005.19
	2005	1846.98	749.99	2596.97
	2006	2269.74	968.93	3238.67
	2007	2947.5	1293.19	4240.69
	2008	3750.91	2522.8	6273.71
	2009	2849.84	1741.07	4590.91
Uzbekistan	1997	11.93	0.72	12.65
	1998	1.96	0.31	2.27
	1999	1.54	2.25	3.79
	2000	1.78	0.17	1.95
	2001	2.01	0.12	2.13
	2002	1.73	0.19	1.92
	2003	2.21	2.52	4.73
	2004	5.02	0.23	5.25
	2005	9.1	0.03	9.13
	2006	12.3	0.05	12.35
	2007	36.49	3.24	39.73
	2008	42.68	2.49	45.17
	2009	37.37	1.2	38.57
Yemen	1997	56.51	0.01	56.52
	1998	93.78	0.02	93.8
	1999	86.69	0.04	86.73
	2000	68.89	17.8	86.69
	2001	50.82	295.25	346.07
	2002	76.55	272.56	349.11
	2003	104.59	212.15	316.74
	2004	111.12	30.71	141.83
	2005	119.03	48.91	167.94
	2006	262.39	52.08	314.47

Country	Year	Export	Import	Trade
	2007	220.71	28.74	249.45
	2008	342.14	63.91	406.05
	2009	203.86	73.66	277.52

Source: Direction of Trade Statistics, International Monetary Fund. Retrieved on 9 April 2011 at http//:www.imfstatistics.org/dot/

Main Economic Indicators of OIC Countries (USD in Million)

Country	Year	GDP (i)	GDP(j)
Afghanistan	1997	1,178,457,033.12	n.a.
	1998	784,514,242.48	n.a.
	1999	860,308,947.73	n.a.
	2000	937,897,380.19	n.a.
	2001	946,774,985.03	n.a.
	2002	998,470,570.11	43,389,075.79
	2003	1,049,546,379.09	45,828,146.85
	2004	1,123,869,146.40	51,389,213.07
	2005	1,188,347,284.14	56,789,613.18
	2006	1,293,582,092.92	62,779,932.28
	2007	1,469,623,237.50	62,834,433.44
	2008	1,584,488,879.39	62,539,391.13
	2009	1,485,329,982.52	91,086,532.21
Albania	1997	1,178,457,033.12	19,265,120.30
	1998	784,514,242.48	21,145,313.59
	1999	860,308,947.73	25,440,018.17
	2000	937,897,380.19	26,146,449.55
	2001	946,774,985.03	28,020,686.64
	2002	998,470,570.11	29,466,049.38
	2003	1,049,546,379.09	36,232,853.09
	2004	1,123,869,146.40	45,239,072.42

Country	Year	GDP (i)	GDP(j)
	2005	1,188,347,284.14	48,985,285.03
	2006	1,293,582,092.92	52,485,990.41
	2007	1,469,623,237.50	60,189,142.71
	2008	1,584,488,879.39	69,723,943.68
	2009	1,485,329,982.52	63,239,394.85
Algeria	1997	1,178,457,033.12	39,425,418.90
	1998	784,514,242.48	40,733,541.95
	1999	860,308,947.73	37,073,638.35
	2000	937,897,380.19	33,531,247.83
	2001	946,774,985.03	33,524,295.50
	2002	998,470,570.11	34,020,893.79
	2003	1,049,546,379.09	37,434,565.79
	2004	1,123,869,146.40	42,295,494.89
	2005	1,188,347,284.14	43,715,976.13
	2006	1,293,582,092.92	44,978,625.92
	2007	1,469,623,237.50	48,570,656.77
	2008	1,584,488,879.39	53,350,786.15
	2009	1,485,329,982.52	48,424,569.93
Azerbajian	1997	1,178,457,033.12	50,803,976.45
	1998	784,514,242.48	57,005,079.72
	1999	860,308,947.73	57,990,157.49
	2000	937,897,380.19	59,242,889.84
	2001	946,774,985.03	62,721,079.64

Country	Year	GDP (i)	GDP(j)
	2002	998,470,570.11	66,340,690.97
	2003	1,049,546,379.09	72,757,661.11
	2004	1,123,869,146.40	80,375,110.35
	2005	1,188,347,284.14	105,122,395.88
	2006	1,293,582,092.92	149,873,362.38
	2007	1,469,623,237.50	195,558,466.97
	2008	1,584,488,879.39	225,649,535.71
	2009	1,485,329,982.52	251,575,484.29
Bahrain	1997	1,178,457,033.12	68,270,995.70
	1998	784,514,242.48	71,079,782.67
	1999	860,308,947.73	74,395,353.02
	2000	937,897,380.19	78,144,028.37
	2001	946,774,985.03	81,741,589.79
	2002	998,470,570.11	86,644,726.54
	2003	1,049,546,379.09	92,834,281.74
	2004	1,123,869,146.40	97,701,487.49
	2005	1,188,347,284.14	105,157,799.14
	2006	1,293,582,092.92	112,446,403.91
	2007	1,469,623,237.50	121,533,537.43
	2008	1,584,488,879.39	129,602,914.70
	2009	1,485,329,982.52	n.a.
Bangladesh	1997	1,178,457,033.12	410,862,121.73
	1998	784,514,242.48	404,511,505.94

Country	Year	GDP (i)	GDP(j)
	1999	860,308,947.73	400,825,196.31
	2000	937,897,380.19	406,249,357.43
	2001	946,774,985.03	398,202,058.03
	2002	998,470,570.11	393,149,835.30
	2003	1,049,546,379.09	408,768,988.07
	2004	1,123,869,146.40	428,490,484.94
	2005	1,188,347,284.14	433,651,517.81
	2006	1,293,582,092.92	423,980,251.62
	2007	1,469,623,237.50	438,560,393.42
	2008	1,584,488,879.39	467,966,768.69
	2009	1,485,329,982.52	493,700,372.61
Benin	1997	1,178,457,033.12	11,595,446.39
	1998	784,514,242.48	11,972,124.55
	1999	860,308,947.73	11,996,803.64
	2000	937,897,380.19	10,999,213.10
	2001	946,774,985.03	11,240,691.88
	2002	998,470,570.11	12,312,970.84
	2003	1,049,546,379.09	15,336,135.70
	2004	1,123,869,146.40	17,445,853.66
	2005	1,188,347,284.14	17,939,179.43
	2006	1,293,582,092.92	18,863,900.67
	2007	1,469,623,237.50	21,496,813.21
	2008	1,584,488,879.39	24,212,843.89

Country	Year	GDP (i)	GDP(j)
	2009	1,485,329,982.52	23,855,340.28
Brunei	1997	1,178,457,033.12	65,789,027.47
	1998	784,514,242.48	58,712,282.33
	1999	860,308,947.73	58,974,358.60
	2000	937,897,380.19	60,011,532.68
	2001	946,774,985.03	59,586,072.43
	2002	998,470,570.11	61,508,729.36
	2003	1,049,546,379.09	64,924,087.29
	2004	1,123,869,146.40	67,284,897.83
	2005	1,188,347,284.14	69,068,138.09
	2006	1,293,582,092.92	75,465,149.31
	2007	1,469,623,237.50	n.a.
	2008	1,584,488,879.39	n.a.
	2009	1,485,329,982.52	n.a.
Burkina Faso	1997	1,178,457,033.12	27,501,871.24
	1998	784,514,242.48	29,217,820.29
	1999	860,308,947.73	30,146,612.62
	2000	937,897,380.19	26,642,301.52
	2001	946,774,985.03	27,576,860.99
	2002	998,470,570.11	30,180,235.43
	2003	1,049,546,379.09	39,177,850.08
	2004	1,123,869,146.40	45,212,246.26
	2005	1,188,347,284.14	48,030,425.41
	2006	1,293,582,092.92	51,072,518.10

Country	Year	GDP (i)	GDP(j)
	2007	1,469,623,237.50	57,837,489.92
	2008	1,584,488,879.39	64,885,669.40
	2009	1,485,329,982.52	63,600,466.77
Cameroon	1997	1,178,457,033.12	106,962,503.92
	1998	784,514,242.48	101,364,658.95
	1999	860,308,947.73	108,107,796.06
	2000	937,897,380.19	100,750,403.31
	2001	946,774,985.03	94,100,237.31
	2002	998,470,570.11	103,616,933.99
	2003	1,049,546,379.09	128,507,636.72
	2004	1,123,869,146.40	147,433,245.91
	2005	1,188,347,284.14	150,798,761.25
	2006	1,293,582,092.92	156,147,700.10
	2007	1,469,623,237.50	176,802,751.09
	2008	1,584,488,879.39	194,553,383.84
	2009	1,485,329,982.52	188,016,758.87
Chad	1997	1,178,457,033.12	13,316,275.13
	1998	784,514,242.48	14,069,773.52
	1999	860,308,947.73	13,481,736.51
	2000	937,897,380.19	11,542,091.37
	2001	946,774,985.03	12,476,965.66
	2002	998,470,570.11	14,301,250.60
	2003	1,049,546,379.09	19,547,628.06

Country	Year	GDP (i)	GDP(j)
	2004	1,123,869,146.40	28,856,008.72
	2005	1,188,347,284.14	33,770,307.14
	2006	1,293,582,092.92	34,264,095.63
	2007	1,469,623,237.50	37,520,307.67
	2008	1,584,488,879.39	39,795,918.37
	2009	1,485,329,982.52	37,168,386.15
Comoros	1997	1,178,457,033.12	1,657,017.42
	1998	784,514,242.48	1,656,872.94
	1999	860,308,947.73	1,624,676.96
	2000	937,897,380.19	1,421,836.76
	2001	946,774,985.03	1,429,320.25
	2002	998,470,570.11	1,560,019.27
	2003	1,049,546,379.09	1,919,947.98
	2004	1,123,869,146.40	2,107,095.88
	2005	1,188,347,284.14	2,199,070.64
	2006	1,293,582,092.92	2,252,386.56
	2007	1,469,623,237.50	2,460,048.83
	2008	1,584,488,879.39	2,664,012.34
	2009	1,485,329,982.52	2,573,732.25
Cote D'ivoire	1997	1,178,457,033.12	112,713,470.20
	1998	784,514,242.48	116,205,218.44
	1999	860,308,947.73	113,121,079.50
	2000	937,897,380.19	94,700,055.42

Country	Year	GDP (i)	GDP(j)
	2001	946,774,985.03	91,697,944.00
	2002	998,470,570.11	94,931,110.12
	2003	1,049,546,379.09	112,602,375.10
	2004	1,123,869,146.40	125,862,543.65
	2005	1,188,347,284.14	127,839,387.31
	2006	1,293,582,092.92	129,606,767.14
	2007	1,469,623,237.50	143,447,074.38
	2008	1,584,488,879.39	157,140,974.89
	2009	1,485,329,982.52	154,332,278.75
Djibouti	1997	1,178,457,033.12	3,669,164.69
	1998	784,514,242.48	3,673,342.06
	1999	860,308,947.73	3,775,212.46
	2000	937,897,380.19	3,775,553.85
	2001	946,774,985.03	3,867,685.41
	2002	998,470,570.11	3,967,262.01
	2003	1,049,546,379.09	4,092,399.12
	2004	1,123,869,146.40	4,242,497.46
	2005	1,188,347,284.14	4,375,578.01
	2006	1,293,582,092.92	4,576,629.07
	2007	1,469,623,237.50	4,817,721.19
	2008	1,584,488,879.39	5,090,851.93
	2009	1,485,329,982.52	5,352,318.45
Egypt	1997	1,178,457,033.12	509,328,413.92

Country	Year	GDP (i)	GDP(j)
	1998	784,514,242.48	530,180,045.44
	1999	860,308,947.73	559,942,616.91
	2000	937,897,380.19	587,285,535.28
	2001	946,774,985.03	564,346,867.35
	2002	998,470,570.11	493,543,149.29
	2003	1,049,546,379.09	436,440,424.33
	2004	1,123,869,146.40	371,911,253.34
	2005	1,188,347,284.14	396,839,490.66
	2006	1,293,582,092.92	444,148,903.50
	2007	1,469,623,237.50	477,922,690.46
	2008	1,584,488,879.39	532,144,979.20
	2009	1,485,329,982.52	555,790,196.63
Gabon	1997	1,178,457,033.12	31,334,184.61
	1998	784,514,242.48	32,023,962.89
	1999	860,308,947.73	28,090,272.41
	2000	937,897,380.19	23,792,671.29
	2001	946,774,985.03	23,564,198.41
	2002	998,470,570.11	24,781,426.44
	2003	1,049,546,379.09	30,426,565.04
	2004	1,123,869,146.40	33,859,130.82
	2005	1,188,347,284.14	34,942,495.82
	2006	1,293,582,092.92	35,752,752.12
	2007	1,469,623,237.50	41,177,422.15

Country	Year	GDP (i)	GDP(j)
	2008	1,584,488,879.39	44,998,976.01
	2009	1,485,329,982.52	42,383,278.30
Gambia	1997	1,178,457,033.12	2,089,980.99
	1998	784,514,242.48	2,072,416.75
	1999	860,308,947.73	2,056,833.55
	2000	937,897,380.19	1,930,709.11
	2001	946,774,985.03	1,665,027.25
	2002	998,470,570.11	1,270,556.45
	2003	1,049,546,379.09	989,682.08
	2004	1,123,869,146.40	963,459.62
	2005	1,188,347,284.14	1,064,739.89
	2006	1,293,582,092.92	1,155,231.50
	2007	1,469,623,237.50	1,384,967.39
	2008	1,584,488,879.39	1,647,129.88
	2009	1,485,329,982.52	1,435,388.59
Guinea	1997	1,178,457,033.12	37,095,966.19
	1998	784,514,242.48	34,503,615.23
	1999	860,308,947.73	32,048,909.17
	2000	937,897,380.19	25,936,354.73
	2001	946,774,985.03	24,102,833.97
	2002	998,470,570.11	24,623,825.68
	2003	1,049,546,379.09	25,719,530.07
	2004	1,123,869,146.40	23,502,184.79

Country	Year	GDP (i)	GDP(j)
	2005	1,188,347,284.14	14,759,061.45
	2006	1,293,582,092.92	10,334,599.98
	2007	1,469,623,237.50	13,622,563.98
	2008	1,584,488,879.39	10,732,438.02
	2009	1,485,329,982.52	11,059,307.71
Guinea-Bissau	1997	1,178,457,033.12	6,550,017.61
	1998	784,514,242.48	4,692,218.50
	1999	860,308,947.73	4,775,453.96
	2000	937,897,380.19	4,488,656.04
	2001	946,774,985.03	4,326,829.37
	2002	998,470,570.11	4,241,952.13
	2003	1,049,546,379.09	4,950,228.70
	2004	1,123,869,146.40	5,633,449.21
	2005	1,188,347,284.14	5,904,904.54
	2006	1,293,582,092.92	6,090,698.44
	2007	1,469,623,237.50	6,650,801.36
	2008	1,584,488,879.39	7,366,482.79
	2009	1,485,329,982.52	7,213,032.84
Guyana	1997	1,178,457,033.12	18,728,450.10
	1998	784,514,242.48	17,500,748.71
	1999	860,308,947.73	15,438,999.64
	2000	937,897,380.19	14,847,248.44
	2001	946,774,985.03	14,505,863.94

Country	Year	GDP (i)	GDP(j)
	2002	998,470,570.11	14,449,218.24
	2003	1,049,546,379.09	14,267,871.98
	2004	1,123,869,146.40	14,289,432.18
	2005	1,188,347,284.14	13,981,026.27
	2006	1,293,582,092.92	14,584,496.35
	2007	1,469,623,237.50	15,401,196.16
	2008	1,584,488,879.39	15,635,534.16
	2009	1,485,329,982.52	16,075,863.07
Indonesia	1997	1,178,457,033.12	5,262,167,186.51
	1998	784,514,242.48	1,307,473,260.51
	1999	860,308,947.73	1,686,763,283.46
	2000	937,897,380.19	1,650,210,478.83
	2001	946,774,985.03	1,407,429,365.25
	2002	998,470,570.11	1,617,029,843.26
	2003	1,049,546,379.09	1,834,159,834.52
	2004	1,123,869,146.40	1,847,747,361.91
	2005	1,188,347,284.14	1,809,295,000.11
	2006	1,293,582,092.92	2,014,201,801.09
	2007	1,469,623,237.50	2,149,777,381.36
	2008	1,584,488,879.39	2,144,965,437.49
	2009	1,485,329,982.52	2,094,083,361.69
Iran	1997	1,178,457,033.12	1,052,987,209.65
	1998	784,514,242.48	941,852,187.13

Country	Year	GDP (i)	GDP(j)
	1999	860,308,947.73	737,014,367.38
	2000	937,897,380.19	562,702,860.98
	2001	946,774,985.03	574,320,331.75
	2002	998,470,570.11	451,243,540.21
	2003	1,049,546,379.09	470,172,505.32
	2004	1,123,869,146.40	469,041,894.31
	2005	1,188,347,284.14	471,781,180.16
	2006	1,293,582,092.92	488,773,099.80
	2007	1,469,623,237.50	520,105,333.32
	2008	1,584,488,879.39	524,321,378.30
	2009	1,485,329,982.52	510,038,479.49
Iraq	1997	1,178,457,033.12	101,138,633.58
	1998	784,514,242.48	123,161,532.32
	1999	860,308,947.73	127,250,798.41
	2000	937,897,380.19	124,313,013.15
	2001	946,774,985.03	116,172,361.15
	2002	998,470,570.11	105,386,617.84
	2003	1,049,546,379.09	n.a.
	2004	1,123,869,146.40	122,062,019.24
	2005	1,188,347,284.14	119,516,818.10
	2006	1,293,582,092.92	127,324,069.18
	2007	1,469,623,237.50	151,152,154.94
	2008	1,584,488,879.39	174,091,612.37

Country	Year	GDP (i)	GDP(j)
	2009	1,485,329,982.52	184,936,614.20
Jordan	1997	1,178,457,033.12	69,029,029.74
	1998	784,514,242.48	70,661,770.33
	1999	860,308,947.73	73,437,307.06
	2000	937,897,380.19	76,251,287.47
	2001	946,774,985.03	80,182,499.29
	2002	998,470,570.11	84,816,213.81
	2003	1,049,546,379.09	88,676,140.52
	2004	1,123,869,146.40	95,894,038.21
	2005	1,188,347,284.14	104,038,557.59
	2006	1,293,582,092.92	112,557,313.15
	2007	1,469,623,237.50	121,680,696.30
	2008	1,584,488,879.39	131,195,966.50
	2009	1,485,329,982.52	134,183,631.65
Kazakhstan	1997	1,178,457,033.12	312,196,226.24
	1998	784,514,242.48	295,136,605.51
	1999	860,308,947.73	198,480,201.59
	2000	937,897,380.19	182,919,906.19
	2001	946,774,985.03	201,388,083.00
	2002	998,470,570.11	210,569,218.64
	2003	1,049,546,379.09	237,182,252.55
	2004	1,123,869,146.40	285,772,496.71
	2005	1,188,347,284.14	320,919,504.12

Country	Year	GDP (i)	GDP(j)
	2006	1,293,582,092.92	373,289,700.07
	2007	1,469,623,237.50	419,413,920.85
	2008	1,584,488,879.39	440,401,227.11
	2009	1,485,329,982.52	363,741,581.56
Kuwait	1997	1,178,457,033.12	275,913,027.82
	1998	784,514,242.48	285,122,923.01
	1999	860,308,947.73	278,897,120.04
	2000	937,897,380.19	290,138,549.76
	2001	946,774,985.03	293,199,779.33
	2002	998,470,570.11	305,110,411.98
	2003	1,049,546,379.09	365,464,409.63
	2004	1,123,869,146.40	407,126,794.40
	2005	1,188,347,284.14	453,921,040.48
	2006	1,293,582,092.92	479,062,046.25
	2007	1,469,623,237.50	512,229,627.77
	2008	1,584,488,879.39	n.a.
	2009	1,485,329,982.52	n.a.
Kyrgyzstan	1997	1,178,457,033.12	10,980,521.96
	1998	784,514,242.48	9,352,066.76
	1999	860,308,947.73	5,161,413.33
	2000	937,897,380.19	4,447,051.80
	2001	946,774,985.03	4,607,593.66
	2002	998,470,570.11	4,764,512.26

Country	Year	GDP (i)	GDP(j)
	2003	1,049,546,379.09	5,467,272.88
	2004	1,123,869,146.40	5,993,320.63
	2005	1,188,347,284.14	6,227,534.56
	2006	1,293,582,092.92	6,560,576.13
	2007	1,469,623,237.50	7,651,038.57
	2008	1,584,488,879.39	8,467,805.25
	2009	1,485,329,982.52	7,384,124.98
Lebanon	1997	1,178,457,033.12	157,518,674.89
	1998	784,514,242.48	165,838,264.26
	1999	860,308,947.73	165,629,108.92
	2000	937,897,380.19	167,576,357.69
	2001	946,774,985.03	174,750,012.32
	2002	998,470,570.11	180,681,498.17
	2003	1,049,546,379.09	185,952,951.30
	2004	1,123,869,146.40	200,015,214.45
	2005	1,188,347,284.14	202,211,166.39
	2006	1,293,582,092.92	203,974,069.05
	2007	1,469,623,237.50	219,795,758.05
	2008	1,584,488,879.39	239,464,013.26
	2009	1,485,329,982.52	261,576,859.51
Libya	1997	1,178,457,033.12	n.a.
	1998	784,514,242.48	n.a.
	1999	860,308,947.73	304,843,998.96

Country	Year	GDP (i)	GDP(j)
	2000	937,897,380.19	284,845,385.47
	2001	946,774,985.03	231,059,528.07
	2002	998,470,570.11	109,024,833.43
	2003	1,049,546,379.09	122,144,670.05
	2004	1,123,869,146.40	125,506,072.88
	2005	1,188,347,284.14	132,930,513.60
	2006	1,293,582,092.92	148,252,952.76
	2007	1,469,623,237.50	165,065,008.48
	2008	1,584,488,879.39	170,636,816.60
	2009	1,485,329,982.52	169,919,472.95
Maldives	1997	1,178,457,033.12	4,381,237.96
	1998	784,514,242.48	4,779,614.16
	1999	860,308,947.73	5,123,823.97
	2000	937,897,380.19	5,382,216.76
	2001	946,774,985.03	5,342,447.60
	2002	998,470,570.11	5,476,095.09
	2003	1,049,546,379.09	5,918,135.68
	2004	1,123,869,146.40	6,470,703.13
	2005	1,188,347,284.14	6,196,410.12
	2006	1,293,582,092.92	7,323,125.00
	2007	1,469,623,237.50	7,810,185.19
	2008	1,584,488,879.39	8,345,923.01
	2009	1,485,329,982.52	8,093,191.97

Country	Year	GDP (i)	GDP(j)
Mali	1997	1,178,457,033.12	14,063,539.60
	1998	784,514,242.48	14,754,750.84
	1999	860,308,947.73	15,120,153.12
	2000	937,897,380.19	13,458,164.67
	2001	946,774,985.03	14,691,249.79
	2002	998,470,570.11	16,071,229.06
	2003	1,049,546,379.09	20,773,534.49
	2004	1,123,869,146.40	23,321,463.56
	2005	1,188,347,284.14	24,791,210.24
	2006	1,293,582,092.92	26,305,361.77
	2007	1,469,623,237.50	29,900,773.95
	2008	1,584,488,879.39	33,547,881.74
	2009	1,485,329,982.52	33,197,250.14
Mauritania	1997	1,178,457,033.12	14,757,335.60
	1998	784,514,242.48	12,224,330.72
	1999	860,308,947.73	11,712,050.86
	2000	937,897,380.19	10,496,779.40
	2001	946,774,985.03	10,104,194.44
	2002	998,470,570.11	9,580,470.40
	2003	1,049,546,379.09	10,448,610.46
	2004	1,123,869,146.40	11,298,255.82
	2005	1,188,347,284.14	11,468,134.21
	2006	1,293,582,092.92	13,563,723.31

Country	Year	GDP (i)	GDP(j)
	2007	1,469,623,237.50	13,259,480.75
	2008	1,584,488,879.39	14,952,548.88
	2009	1,485,329,982.52	13,441,830.46
Morocco	1997	1,178,457,033.12	375,446,601.80
	1998	784,514,242.48	400,216,946.31
	1999	860,308,947.73	393,406,175.67
	2000	937,897,380.19	370,206,098.25
	2001	946,774,985.03	373,511,632.33
	2002	998,470,570.11	396,236,418.53
	2003	1,049,546,379.09	483,715,065.07
	2004	1,123,869,146.40	547,577,070.54
	2005	1,188,347,284.14	566,893,884.46
	2006	1,293,582,092.92	613,430,913.79
	2007	1,469,623,237.50	677,714,579.81
	2008	1,584,488,879.39	753,245,489.34
	2009	1,485,329,982.52	761,455,876.88
Mozambique	1997	1,178,457,033.12	60,513,431.16
	1998	784,514,242.48	65,235,950.20
	1999	860,308,947.73	65,412,106.50
	2000	937,897,380.19	55,904,575.91
	2001	946,774,985.03	46,307,473.51
	2002	998,470,570.11	44,224,475.75
	2003	1,049,546,379.09	46,661,906.66

Country	Year	GDP (i)	GDP(j)
	2004	1,123,869,146.40	53,252,256.25
	2005	1,188,347,284.14	56,226,627.15
	2006	1,293,582,092.92	55,438,503.91
	2007	1,469,623,237.50	58,613,250.44
	2008	1,584,488,879.39	66,670,811.97
	2009	1,485,329,982.52	63,988,539.64
Niger	1997	1,178,457,033.12	13,471,516.14
	1998	784,514,242.48	14,728,678.67
	1999	860,308,947.73	14,015,213.56
	2000	937,897,380.19	11,989,100.82
	2001	946,774,985.03	12,470,022.97
	2002	998,470,570.11	13,481,251.61
	2003	1,049,546,379.09	17,071,360.98
	2004	1,123,869,146.40	18,729,440.12
	2005	1,188,347,284.14	19,682,864.03
	2006	1,293,582,092.92	20,949,000.72
	2007	1,469,623,237.50	23,589,263.51
	2008	1,584,488,879.39	27,757,423.49
	2009	1,485,329,982.52	26,519,565.35
Nigeria	1997	1,178,457,033.12	770,837,638.13
	1998	784,514,242.48	730,541,322.32
	1999	860,308,947.73	695,520,804.00
	2000	937,897,380.19	666,428,990.04

Country	Year	GDP (i)	GDP(j)
	2001	946,774,985.03	631,575,990.04
	2002	998,470,570.11	591,168,478.21
	2003	1,049,546,379.09	609,513,723.64
	2004	1,123,869,146.40	655,562,839.49
	2005	1,188,347,284.14	697,196,330.75
	2006	1,293,582,092.92	764,934,035.54
	2007	1,469,623,237.50	825,476,947.09
	2008	1,584,488,879.39	924,633,535.87
	2009	1,485,329,982.52	779,295,565.74
Oman	1997	1,178,457,033.12	136,529,753.28
	1998	784,514,242.48	139,459,141.02
	1999	860,308,947.73	139,027,861.42
	2000	937,897,380.19	147,169,485.56
	2001	946,774,985.03	158,327,658.53
	2002	998,470,570.11	161,688,830.53
	2003	1,049,546,379.09	161,971,901.14
	2004	1,123,869,146.40	167,847,634.56
	2005	1,188,347,284.14	174,604,925.26
	2006	1,293,582,092.92	184,018,206.95
	2007	1,469,623,237.50	196,755,741.92
	2008	1,584,488,879.39	222,505,867.94
	2009	1,485,329,982.52	n.a.
Pakistan	1997	1,178,457,033.12	891,904,863.83

Country	Year	GDP (i)	GDP(j)
	1998	784,514,242.48	818,315,208.08
	1999	860,308,947.73	787,173,196.49
	2000	937,897,380.19	739,523,749.70
	2001	946,774,985.03	669,534,619.64
	2002	998,470,570.11	651,412,796.36
	2003	1,049,546,379.09	723,867,835.59
	2004	1,123,869,146.40	790,143,275.79
	2005	1,188,347,284.14	824,060,150.38
	2006	1,293,582,092.92	867,346,938.78
	2007	1,469,623,237.50	906,146,725.59
	2008	1,584,488,879.39	890,715,630.55
	2009	1,485,329,982.52	732,986,317.45
Qatar	1997	1,178,457,033.12	n.a.
	1998	784,514,242.48	n.a.
	1999	860,308,947.73	n.a.
	2000	937,897,380.19	169,141,805.70
	2001	946,774,985.03	175,384,610.33
	2002	998,470,570.11	187,997,434.04
	2003	1,049,546,379.09	194,494,136.62
	2004	1,123,869,146.40	234,631,657.87
	2005	1,188,347,284.14	253,177,109.71
	2006	1,293,582,092.92	299,488,621.55
	2007	1,469,623,237.50	380,900,103.06
	2008	1,584,488,879.39	477,208,445.89

Country	Year	GDP (i)	GDP(j)
	2009	1,485,329,982.52	517,437,810.42
Saudi Arabia	1997	1,178,457,033.12	1,586,479,409.92
	1998	784,514,242.48	1,619,697,773.22
	1999	860,308,947.73	1,609,570,626.22
	2000	937,897,380.19	1,682,516,650.67
	2001	946,774,985.03	1,694,558,041.13
	2002	998,470,570.11	1,698,659,427.02
	2003	1,049,546,379.09	1,833,955,555.56
	2004	1,123,869,146.40	1,925,684,102.56
	2005	1,188,347,284.14	2,036,000,313.36
	2006	1,293,582,092.92	2,097,826,121.10
	2007	1,469,623,237.50	2,138,284,121.90
	2008	1,584,488,879.39	2,225,723,364.49
	2009	1,485,329,982.52	2,236,704,761.90
Senegal	1997	1,178,457,033.12	48,167,618.23
	1998	784,514,242.48	50,582,248.87
	1999	860,308,947.73	51,507,988.87
	2000	937,897,380.19	45,998,317.23
	2001	946,774,985.03	46,453,321.26
	2002	998,470,570.11	49,387,628.72
	2003	1,049,546,379.09	63,039,699.82
	2004	1,123,869,146.40	73,766,317.37
	2005	1,188,347,284.14	77,702,949.09

Country	Year	GDP (i)	GDP(j)
	2006	1,293,582,092.92	80,847,233.11
	2007	1,469,623,237.50	92,148,275.42
	2008	1,584,488,879.39	101,344,149.37
	2009	1,485,329,982.52	98,630,729.86
Sierra Leone	1997	1,178,457,033.12	664,243.19
	1998	784,514,242.48	413,518.87
	1999	860,308,947.73	329,263.42
	2000	937,897,380.19	294,796.88
	2001	946,774,985.03	366,877.83
	2002	998,470,570.11	442,469.85
	2003	1,049,546,379.09	432,422.98
	2004	1,123,869,146.40	403,991.95
	2005	1,188,347,284.14	404,767.17
	2006	1,293,582,092.92	423,721.63
	2007	1,469,623,237.50	447,475.00
	2008	1,584,488,879.39	472,866.05
	2009	1,485,329,982.52	441,933.22
Somalia	1997	1,178,457,033.12	n.a.
	1998	784,514,242.48	n.a.
	1999	860,308,947.73	n.a.
	2000	937,897,380.19	n.a.
	2001	946,774,985.03	n.a.
	2002	998,470,570.11	n.a.
	2003	1,049,546,379.09	n.a.
	2004	1,123,869,146.40	n.a.
	2005	1,188,347,284.14	n.a.
	2006	1,293,582,092.92	n.a.

Country	Year	GDP (i)	GDP(j)
	2007	1,469,623,237.50	n.a.
	2008	1,584,488,879.39	n.a.
	2009	1,485,329,982.52	n.a.
Sudan	1997	1,178,457,033.12	78,927,015.11
	1998	784,514,242.48	64,656,415.74
	1999	860,308,947.73	53,144,502.49
	2000	937,897,380.19	56,466,393.00
	2001	946,774,985.03	59,653,250.19
	2002	998,470,570.11	61,628,091.27
	2003	1,049,546,379.09	66,843,241.23
	2004	1,123,869,146.40	71,094,804.99
	2005	1,188,347,284.14	79,842,650.31
	2006	1,293,582,092.92	99,730,088.84
	2007	1,469,623,237.50	118,399,626.40
	2008	1,584,488,879.39	121,916,531.62
	2009	1,485,329,982.52	115,849,120.31
Suriname	1997	1,178,457,033.12	103,220.91
	1998	784,514,242.48	104,825.29
	1999	860,308,947.73	48,332.10
	2000	937,897,380.19	31,469.64
	2001	946,774,985.03	19,921.86
	2002	998,470,570.11	19,373.07
	2003	1,049,546,379.09	18,552.22
	2004	1,123,869,146.40	19,070.30

Country	Year	GDP (i)	GDP(j)
	2005	1,188,347,284.14	19,832.31
	2006	1,293,582,092.92	20,732.28
	2007	1,469,623,237.50	21,796.82
	2008	1,584,488,879.39	22,917.41
	2009	1,485,329,982.52	n.a.
Syria	1997	1,178,457,033.12	170,649,811.41
	1998	784,514,242.48	178,833,483.99
	1999	860,308,947.73	174,438,197.46
	2000	937,897,380.19	193,258,949.13
	2001	946,774,985.03	200,950,797.94
	2002	998,470,570.11	205,545,227.45
	2003	1,049,546,379.09	209,316,167.41
	2004	1,123,869,146.40	215,625,981.56
	2005	1,188,347,284.14	218,010,002.63
	2006	1,293,582,092.92	233,612,506.75
	2007	1,469,623,237.50	248,764,775.40
	2008	1,584,488,879.39	281,010,974.39
	2009	1,485,329,982.52	291,490,436.37
Tajikistan	1997	1,178,457,033.12	27,113,032.82
	1998	784,514,242.48	20,626,979.14
	1999	860,308,947.73	13,250,821.56
	2000	937,897,380.19	8,605,502.94
	2001	946,774,985.03	8,313,646.20

Country	Year	GDP (i)	GDP(j)
	2002	998,470,570.11	7,777,794.87
	2003	1,049,546,379.09	7,731,967.88
	2004	1,123,869,146.40	8,797,240.30
	2005	1,188,347,284.14	8,955,669.46
	2006	1,293,582,092.92	9,068,130.97
	2007	1,469,623,237.50	9,350,960.25
	2008	1,584,488,879.39	10,143,817.88
	2009	1,485,329,982.52	8,672,742.76
Togo	1997	1,178,457,033.12	4,804,325.01
	1998	784,514,242.48	4,641,376.49
	1999	860,308,947.73	4,555,179.86
	2000	937,897,380.19	3,909,148.22
	2001	946,774,985.03	3,794,374.97
	2002	998,470,570.11	4,158,091.70
	2003	1,049,546,379.09	5,113,217.92
	2004	1,123,869,146.40	5,805,660.88
	2005	1,188,347,284.14	5,872,481.03
	2006	1,293,582,092.92	6,161,058.55
	2007	1,469,623,237.50	6,846,420.42
	2008	1,584,488,879.39	7,470,491.56
	2009	1,485,329,982.52	7,245,166.08
Tunisia	1997	1,178,457,033.12	134,021,325.98
	1998	784,514,242.48	135,703,295.40

Country	Year	GDP (i)	GDP(j)
	1999	860,308,947.73	138,659,023.21
	2000	937,897,380.19	125,440,497.79
	2001	946,774,985.03	125,713,159.11
	2002	998,470,570.11	129,125,226.11
	2003	1,049,546,379.09	150,555,656.86
	2004	1,123,869,146.40	164,498,627.81
	2005	1,188,347,284.14	164,590,050.47
	2006	1,293,582,092.92	169,192,398.17
	2007	1,469,623,237.50	187,471,547.72
	2008	1,584,488,879.39	203,208,048.71
	2009	1,485,329,982.52	191,115,518.79
Turkey	1997	1,178,457,033.12	4,519,872,597.88
	1998	784,514,242.48	2,692,871,001.15
	1999	860,308,947.73	1,621,762,797.85
	2000	937,897,380.19	1,158,989,269.52
	2001	946,774,985.03	556,833,206.93
	2002	998,470,570.11	481,438,014.03
	2003	1,049,546,379.09	508,398,159.09
	2004	1,123,869,146.40	585,322,798.49
	2005	1,188,347,284.14	673,612,049.15
	2006	1,293,582,092.92	677,168,487.89
	2007	1,469,623,237.50	776,896,916.72
	2008	1,584,488,879.39	782,784,024.86

Country	Year	GDP (i)	GDP(j)
	2009	1,485,329,982.52	626,506,722.57
Turkmenistan	1997	1,178,457,033.12	74,244,999.09
	1998	784,514,242.48	66,812,514.49
	1999	860,308,947.73	52,142,269.36
	2000	937,897,380.19	55,858,896.25
	2001	946,774,985.03	58,912,866.15
	2002	998,470,570.11	68,646,599.83
	2003	1,049,546,379.09	81,882,747.71
	2004	1,123,869,146.40	88,809,754.39
	2005	1,188,347,284.14	98,833,606.30
	2006	1,293,582,092.92	111,713,023.39
	2007	1,469,623,237.50	126,641,651.03
	2008	1,584,488,879.39	116,555,757.75
	2009	1,485,329,982.52	113,337,320.57
Uganda	1997	1,178,457,033.12	76,455,284.30
	1998	784,514,242.48	73,986,694.91
	1999	860,308,947.73	71,411,467.36
	2000	937,897,380.19	66,594,049.81
	2001	946,774,985.03	60,211,378.38
	2002	998,470,570.11	65,729,398.59
	2003	1,049,546,379.09	62,124,473.42
	2004	1,123,869,146.40	72,383,840.97
	2005	1,188,347,284.14	78,260,900.15

Country	Year	GDP (i)	GDP(j)
	2006	1,293,582,092.92	84,086,244.74
	2007	1,469,623,237.50	93,640,749.02
	2008	1,584,488,879.39	106,968,686.93
	2009	1,485,329,982.52	102,183,702.07
United Arab Emirates	1997	1,178,457,033.12	483,108,298.61
	1998	784,514,242.48	505,213,311.46
	1999	860,308,947.73	525,652,062.09
	2000	937,897,380.19	551,495,505.91
	2001	946,774,985.03	558,348,984.06
	2002	998,470,570.11	574,692,256.56
	2003	1,049,546,379.09	641,876,085.07
	2004	1,123,869,146.40	706,014,107.22
	2005	1,188,347,284.14	764,367,055.47
	2006	1,293,582,092.92	828,914,337.43
	2007	1,469,623,237.50	879,532,971.56
	2008	1,584,488,879.39	926,765,472.16
	2009	1,485,329,982.52	917,338,161.75
Uzbekistan	1997	1,178,457,033.12	147,446,037.74
	1998	784,514,242.48	107,834,325.26
	1999	860,308,947.73	85,392,329.91
	2000	937,897,380.19	46,645,337.25
	2001	946,774,985.03	26,576,576.74
	2002	998,470,570.11	15,550,483.23

Country	Year	GDP (i)	GDP(j)
	2003	1,049,546,379.09	12,828,422.07
	2004	1,123,869,146.40	13,161,951.37
	2005	1,188,347,284.14	12,901,271.27
	2006	1,293,582,092.92	12,634,196.00
	2007	1,469,623,237.50	13,350,320.98
	2008	1,584,488,879.39	13,939,137.19
	2009	1,485,329,982.52	13,266,032.46
Yemen	1997	1,178,457,033.12	14,695,558.81
	1998	784,514,242.48	14,867,226.71
	1999	860,308,947.73	13,335,415.85
	2000	937,897,380.19	13,411,183.74
	2001	946,774,985.03	13,436,890.26
	2002	998,470,570.11	13,418,322.41
	2003	1,049,546,379.09	13,245,218.79
	2004	1,123,869,146.40	13,668,356.41
	2005	1,188,347,284.14	13,924,123.04
	2006	1,293,582,092.92	13,968,993.91
	2007	1,469,623,237.50	14,294,752.57
	2008	1,584,488,879.39	14,757,326.73
	2009	1,485,329,982.52	15,074,417.95

Source: International Monetary Fund. Retrieved on 9 April 2011 at http//:www.imfstatistics.org

Main Economic Indicators of OIC Countries (USD in Million)

Country	Year	PCGDP(i)	PCGDP(j)
Afghanistan	1997	54.39	n.a.
	1998	35.32	n.a.
	1999	37.80	n.a.
	2000	40.30	n.a.
	2001	39.83	n.a.
	2002	41.18	1.75
	2003	42.47	1.80
	2004	44.65	1.96
	2005	46.36	2.12
	2006	49.57	2.28
	2007	55.34	2.23
	2008	58.66	2.15
	2009	54.08	3.06
Albania	1997	54.39	6.24
	1998	35.32	6.88
	1999	37.80	8.29
	2000	40.3	8.52
	2001	39.83	9.13
	2002	41.18	9.58
	2003	42.47	11.74
	2004	44.65	14.6
	2005	46.36	15.75
	2006	49.57	16.81
	2007	55.34	19.22
	2008	58.66	22.18
	2009	54.08	20.04
Algeria	1997	54.39	1.35
	1998	35.32	1.37
	1999	37.80	1.23
	2000	40.3	1.10
	2001	39.83	1.08
	2002	41.18	1.08
	2003	42.47	1.17

Country	Year	PCGDP(i)	PCGDP(j)
	2004	44.65	1.31
	2005	46.36	1.33
	2006	49.57	1.35
	2007	55.34	1.43
	2008	58.66	1.55
	2009	54.08	1.39
Azerbajian	1997	54.39	6.49
	1998	35.32	7.21
	1999	37.80	7.27
	2000	40.3	7.36
	2001	39.83	7.74
	2002	41.18	8.12
	2003	42.47	8.84
	2004	44.65	9.68
	2005	46.36	12.52
	2006	49.57	17.66
	2007	55.34	22.79
	2008	58.66	26.00
	2009	54.08	28.65
Bahrain	1997	54.39	112.40
	1998	35.32	114.38
	1999	37.80	117.06
	2000	40.3	120.22
	2001	39.83	122.93
	2002	41.18	127.37
	2003	42.47	133.4
	2004	44.65	137.28
	2005	46.36	144.53
	2006	49.57	151.23
	2007	55.34	160.01
	2008	58.66	167.10
	2009	54.08	n.a.
Bangladesh	1997	54.39	3.09
	1998	35.32	2.98
	1999	37.80	2.90
	2000	40.3	2.89
	2001	39.83	2.78
	2002	41.18	2.69
	2003	42.47	2.76
	2004	44.65	2.84

Country	Year	PCGDP(i)	PCGDP(j)
	2005	46.36	2.83
	2006	49.57	2.73
	2007	55.34	2.78
	2008	58.66	2.92
	2009	54.08	3.04
Benin	1997	54.39	1.90
	1998	35.32	1.91
	1999	37.80	1.86
	2000	40.3	1.65
	2001	39.83	1.64
	2002	41.18	1.73
	2003	42.47	2.09
	2004	44.65	2.29
	2005	46.36	2.28
	2006	49.57	2.32
	2007	55.34	2.56
	2008	58.66	2.79
	2009	54.08	2.67
Brunei	1997	54.39	211.89
	1998	35.32	184.49
	1999	37.80	180.96
	2000	40.3	179.96
	2001	39.83	174.78
	2002	41.18	176.62
	2003	42.47	182.62
	2004	44.65	185.48
	2005	46.36	186.63
	2006	49.57	199.94
	2007	55.34	n.a.
	2008	58.66	n.a.
	2009	54.08	n.a.
Burkina Faso	1997	54.39	2.57
	1998	35.32	2.66
	1999	37.80	2.66
	2000	40.3	2.29
	2001	39.83	2.29
	2002	41.18	2.42
	2003	42.47	3.05
	2004	44.65	3.40
	2005	46.36	3.50

Country	Year	PCGDP(i)	PCGDP(j)
	2006	49.57	3.59
	2007	55.34	3.93
	2008	58.66	4.26
	2009	54.08	4.04
Cameroon	1997	54.39	7.24
	1998	35.32	6.69
	1999	37.80	6.98
	2000	40.3	6.35
	2001	39.83	5.79
	2002	41.18	6.23
	2003	42.47	7.55
	2004	44.65	8.47
	2005	46.36	8.46
	2006	49.57	8.57
	2007	55.34	9.48
	2008	58.66	10.19
	2009	54.08	9.63
Chad	1997	54.39	1.75
	1998	35.32	1.79
	1999	37.80	1.66
	2000	40.3	1.375
	2001	39.83	1.43
	2002	41.18	1.58
	2003	42.47	2.09
	2004	44.65	2.97
	2005	46.36	3.37
	2006	49.57	3.32
	2007	55.34	3.53
	2008	58.66	3.65
	2009	54.08	3.32
Comoros	1997	54.39	3.27
	1998	35.32	3.2
	1999	37.80	3.07
	2000	40.3	2.63
	2001	39.83	2.59
	2002	41.18	2.77
	2003	42.47	3.34
	2004	44.65	3.58
	2005	46.36	3.66
	2006	49.57	3.67

Country	Year	PCGDP(i)	PCGDP(j)
	2007	55.34	3.92
	2008	58.66	4.14
	2009	54.08	3.90
Cote D'ivoire	1997	54.39	7.08
	1998	35.32	7.08
	1999	37.80	6.71
	2000	40.3	5.48
	2001	39.83	5.18
	2002	41.18	5.26
	2003	42.47	6.10
	2004	44.65	6.68
	2005	46.36	6.64
	2006	49.57	6.59
	2007	55.34	7.13
	2008	58.66	7.63
	2009	54.08	7.32
Djibouti	1997	54.39	5.53
	1998	35.32	5.35
	1999	37.80	5.32
	2000	40.3	5.18
	2001	39.83	5.18
	2002	41.18	5.20
	2003	42.47	5.26
	2004	44.65	5.36
	2005	46.36	5.44
	2006	49.57	5.58
	2007	55.34	5.77
	2008	58.66	5.99
	2009	54.08	6.19
Egypt	1997	54.39	7.68
	1998	35.32	7.84
	1999	37.80	8.13
	2000	40.3	8.37
	2001	39.83	7.89
	2002	41.18	6.77
	2003	42.47	5.87
	2004	44.65	4.91
	2005	46.36	5.14
	2006	49.57	5.65
	2007	55.34	5.97

Country	Year	PCGDP(i)	PCGDP(j)
	2008	58.66	6.53
	2009	54.08	6.70
Gabon	1997	54.39	27.35
	1998	35.32	27.24
	1999	37.80	23.31
	2000	40.3	19.29
	2001	39.83	18.68
	2002	41.18	19.23
	2003	42.47	23.12
	2004	44.65	25.22
	2005	46.36	25.52
	2006	49.57	25.62
	2007	55.34	28.96
	2008	58.66	31.07
	2009	54.08	28.74
Gambia	1997	54.39	1.79
	1998	35.32	1.71
	1999	37.80	1.64
	2000	40.3	1.48
	2001	39.83	1.24
	2002	41.18	0.91
	2003	42.47	0.69
	2004	44.65	0.65
	2005	46.36	0.70
	2006	49.57	0.74
	2007	55.34	0.86
	2008	58.66	0.99
	2009	54.08	0.84
Guinea	1997	54.39	4.71
	1998	35.32	4.28
	1999	37.80	3.90
	2000	40.3	3.09
	2001	39.83	2.82
	2002	41.18	2.83
	2003	42.47	2.90
	2004	44.65	2.60
	2005	46.36	1.60
	2006	49.57	1.10
	2007	55.34	1.42
	2008	58.66	1.09

Country	Year	PCGDP(i)	PCGDP(j)
	2009	54.08	1.10
Guinea-Bissau	1997	54.39	5.37
	1998	35.32	3.77
	1999	37.80	3.74
	2000	40.3	3.44
	2001	39.83	3.24
	2002	41.18	3.10
	2003	42.47	3.53
	2004	44.65	3.92
	2005	46.36	4.01
	2006	49.57	4.04
	2007	55.34	4.32
	2008	58.66	4.68
	2009	54.08	4.47
Guyana	1997	54.39	24.7
	1998	35.32	23.098
	1999	37.80	20.422
	2000	40.3	19.625
	2001	39.83	19.17
	2002	41.18	19.04
	2003	42.47	18.75
	2004	44.65	18.75
	2005	46.36	18.31
	2006	49.57	19.08
	2007	55.34	20.16
	2008	58.66	20.48
	2009	54.08	21.08
Indonesia	1997	54.39	26.71
	1998	35.32	6.55
	1999	37.80	8.33
	2000	40.3	8.04
	2001	39.83	6.76
	2002	41.18	7.67
	2003	42.47	8.59
	2004	44.65	8.54
	2005	46.36	8.25
	2006	49.57	9.08
	2007	55.34	9.57
	2008	58.66	9.43
	2009	54.08	9.10

Country	Year	PCGDP(i)	PCGDP(j)
Iran	1997	54.39	17.32
	1998	35.32	15.23
	1999	37.80	11.72
	2000	40.3	8.8
	2001	39.83	8.84
	2002	41.18	6.84
	2003	42.47	7.01
	2004	44.65	6.89
	2005	46.36	6.83
	2006	49.57	6.97
	2007	55.34	7.32
	2008	58.66	7.29
	2009	54.08	7.00
Iraq	1997	54.39	4.41
	1998	35.32	5.21
	1999	37.80	5.23
	2000	40.3	4.95
	2001	39.83	4.51
	2002	41.18	3.99
	2003	42.47	n.a.
	2004	44.65	4.39
	2005	46.36	4.20
	2006	49.57	4.36
	2007	55.34	5.05
	2008	58.66	5.67
	2009	54.08	5.87
Jordan	1997	54.39	15.48
	1998	35.32	15.37
	1999	37.80	15.69
	2000	40.3	15.89
	2001	39.83	16.30
	2002	41.18	16.83
	2003	42.47	17.17
	2004	44.65	18.13
	2005	46.36	19.22
	2006	49.57	20.31
	2007	55.34	21.44
	2008	58.66	22.57
	2009	54.08	22.55
Kazakhstan	1997	54.39	20.37

Country	Year	PCGDP(i)	PCGDP(j)
	1998	35.32	19.59
	1999	37.80	13.29
	2000	40.3	12.29
	2001	39.83	13.55
	2002	41.18	14.17
	2003	42.47	15.91
	2004	44.65	19.03
	2005	46.36	21.19
	2006	49.57	24.39
	2007	55.34	27.09
	2008	58.66	28.10
	2009	54.08	22.89
Kuwait	1997	54.39	139.35
	1998	35.32	140.66
	1999	37.80	132.37
	2000	40.3	132.48
	2001	39.83	128.88
	2002	41.18	130.67
	2003	42.47	152.50
	2004	44.65	165.53
	2005	46.36	179.03
	2006	49.57	184.29
	2007	55.34	192.35
	2008	58.66	n.a.
	2009	54.08	n.a.
Kyrgyzstan	1997	54.39	2.32
	1998	35.32	1.95
	1999	37.80	1.06
	2000	40.3	0.91
	2001	39.83	0.93
	2002	41.18	0.96
	2003	42.47	1.09
	2004	44.65	1.18
	2005	46.36	1.21
	2006	49.57	1.26
	2007	55.34	1.46
	2008	58.66	1.60
	2009	54.08	1.39
Lebanon	1997	54.39	43.44
	1998	35.32	45.14

Country	Year	PCGDP(i)	PCGDP(j)
	1999	37.80	44.52
	2000	40.3	44.43
	2001	39.83	45.59
	2002	41.18	46.35
	2003	42.47	46.90
	2004	44.65	49.66
	2005	46.36	49.55
	2006	49.57	49.44
	2007	55.34	52.81
	2008	58.66	57.10
	2009	54.08	61.93
Libya	1997	54.39	n.a.
	1998	35.32	n.a.
	1999	37.80	58.19
	2000	40.3	53.28
	2001	39.83	42.34
	2002	41.18	19.58
	2003	42.47	21.49
	2004	44.65	21.63
	2005	46.36	22.44
	2006	49.57	24.52
	2007	55.34	26.76
	2008	58.66	27.11
	2009	54.08	26.47
Maldives	1997	54.39	16.95
	1998	35.32	18.15
	1999	37.80	19.13
	2000	40.3	19.77
	2001	39.83	19.32
	2002	41.18	19.52
	2003	42.47	20.80
	2004	44.65	22.43
	2005	46.36	21.19
	2006	49.57	24.70
	2007	55.34	25.97
	2008	58.66	27.36
	2009	54.08	26.15
Mali	1997	54.39	1.42
	1998	35.32	1.46
	1999	37.80	1.46

Country	Year	PCGDP(i)	PCGDP(j)
	2000	40.3	1.28
	2001	39.83	1.36
	2002	41.18	1.46
	2003	42.47	1.84
	2004	44.65	2.02
	2005	46.36	2.09
	2006	49.57	2.17
	2007	55.34	2.41
	2008	58.66	2.64
	2009	54.08	2.55
Mauritania	1997	54.39	6.16
	1998	35.32	4.96
	1999	37.80	4.63
	2000	40.3	4.03
	2001	39.83	3.77
	2002	41.18	3.48
	2003	42.47	3.69
	2004	44.65	3.88
	2005	46.36	3.84
	2006	49.57	4.43
	2007	55.34	4.22
	2008	58.66	4.65
	2009	54.08	4.08
Morocco	1997	54.39	13.40
	1998	35.32	14.09
	1999	37.80	13.67
	2000	40.3	12.7
	2001	39.83	12.66
	2002	41.18	13.27
	2003	42.47	16.01
	2004	44.65	17.91
	2005	46.36	18.32
	2006	49.57	19.59
	2007	55.34	21.38
	2008	58.66	23.47
	2009	54.08	23.43
Mozambique	1997	54.39	3.58
	1998	35.32	3.77
	1999	37.80	3.68
	2000	40.3	3.07

Country	Year	PCGDP(i)	PCGDP(j)
	2001	39.83	2.47
	2002	41.18	2.29
	2003	42.47	2.36
	2004	44.65	2.63
	2005	46.36	2.70
	2006	49.57	2.59
	2007	55.34	2.68
	2008	58.66	2.98
	2009	54.08	2.80
Niger	1997	54.39	1.35
	1998	35.32	1.43
	1999	37.80	1.31
	2000	40.3	1.09
	2001	39.83	1.10
	2002	41.18	1.14
	2003	42.47	1.4
	2004	44.65	1.48
	2005	46.36	1.50
	2006	49.57	1.54
	2007	55.34	1.67
	2008	58.66	1.89
	2009	54.08	1.73
Nigeria	1997	54.39	6.64
	1998	35.32	6.14
	1999	37.80	5.7
	2000	40.3	5.33
	2001	39.83	4.93
	2002	41.18	4.51
	2003	42.47	4.54
	2004	44.65	4.77
	2005	46.36	4.95
	2006	49.57	5.30
	2007	55.34	5.59
	2008	58.66	6.12
	2009	54.08	5.04
Oman	1997	54.39	60.04
	1998	35.32	60.16
	1999	37.80	58.89
	2000	40.3	61.27
	2001	39.83	64.80

Country	Year	PCGDP(i)	PCGDP(j)
	2002	41.18	65.09
	2003	42.47	64.13
	2004	44.65	65.31
	2005	46.36	66.70
	2006	49.57	68.92
	2007	55.34	72.17
	2008	58.66	79.89
	2009	54.08	n.a.
Pakistan	1997	54.39	6.94
	1998	35.32	6.22
	1999	37.80	5.84
	2000	40.3	5.36
	2001	39.83	4.73
	2002	41.18	4.50
	2003	42.47	4.88
	2004	44.65	5.19
	2005	46.36	5.29
	2006	49.57	5.45
	2007	55.34	5.58
	2008	58.66	5.36
	2009	54.08	4.32
Qatar	1997	54.39	n.a.
	1998	35.32	n.a.
	1999	37.80	n.a.
	2000	40.3	274.22
	2001	39.83	270.54
	2002	41.18	274.64
	2003	42.47	265.88
	2004	44.65	294.38
	2005	46.36	285.94
	2006	49.57	299.31
	2007	55.34	334.84
	2008	58.66	372.57
	2009	54.08	367.13
Saudi Arabia	1997	54.39	82.59
	1998	35.32	82.22
	1999	37.80	79.69
	2000	40.3	81.5
	2001	39.83	80.31
	2002	41.18	78.77

Country	Year	PCGDP(i)	PCGDP(j)
	2003	42.47	83.21
	2004	44.65	85.48
	2005	46.36	88.06
	2006	49.57	88.59
	2007	55.34	88.23
	2008	58.66	89.72
	2009	54.08	88.09
Senegal	1997	54.39	5.27
	1998	35.32	5.39
	1999	37.80	5.34
	2000	40.3	4.65
	2001	39.83	4.57
	2002	41.18	4.73
	2003	42.47	5.89
	2004	44.65	6.72
	2005	46.36	6.88
	2006	49.57	6.98
	2007	55.34	7.75
	2008	58.66	8.3
	2009	54.08	7.87
Sierra Leone	1997	54.39	0.17
	1998	35.32	0.10
	1999	37.80	0.08
	2000	40.3	0.07
	2001	39.83	0.08
	2002	41.18	0.10
	2003	42.47	0.09
	2004	44.65	0.08
	2005	46.36	0.08
	2006	49.57	0.08
	2007	55.34	0.08
	2008	58.66	0.09
	2009	54.08	0.08
Somalia	1997	54.39	n.a.
	1998	35.32	n.a.
	1999	37.80	n.a.
	2000	40.3	n.a.
	2001	39.83	n.a.
	2002	41.18	n.a.
	2003	42.47	n.a.

Country	Year	PCGDP(i)	PCGDP(j)
	2004	44.65	n.a.
	2005	46.36	n.a.
	2006	49.57	n.a.
	2007	55.34	n.a.
	2008	58.66	n.a.
	2009	54.08	n.a.
Sudan	1997	54.39	2.43
	1998	35.32	1.94
	1999	37.80	1.56
	2000	40.3	1.62
	2001	39.83	1.67
	2002	41.18	1.69
	2003	42.47	1.80
	2004	44.65	1.88
	2005	46.36	2.06
	2006	49.57	2.52
	2007	55.34	2.93
	2008	58.66	2.95
	2009	54.08	2.74
Suriname	1997	54.39	0.23
	1998	35.32	0.23
	1999	37.80	0.10
	2000	40.3	0.07
	2001	39.83	0.04
	2002	41.18	0.04
	2003	42.47	0.04
	2004	44.65	0.039
	2005	46.36	0.040
	2006	49.57	0.041
	2007	55.34	0.043
	2008	58.66	0.044
	2009	54.08	n.a.
Syria	1997	54.39	11.13
	1998	35.32	11.39
	1999	37.80	10.85
	2000	40.3	11.7
	2001	39.83	11.85
	2002	41.18	11.79
	2003	42.47	11.66
	2004	44.65	11.65

Country	Year	PCGDP(i)	PCGDP(j)
	2005	46.36	11.40
	2006	49.57	11.92
	2007	55.34	12.39
	2008	58.66	13.65
	2009	54.08	13.82
Tajikistan	1997	54.39	4.56
	1998	35.32	3.42
	1999	37.80	2.17
	2000	40.3	1.39
	2001	39.83	1.33
	2002	41.18	1.24
	2003	42.47	1.21
	2004	44.65	1.36
	2005	46.36	1.37
	2006	49.57	1.37
	2007	55.34	1.39
	2008	58.66	1.48
	2009	54.08	1.25
Togo	1997	54.39	1.01
	1998	35.32	0.94
	1999	37.80	0.90
	2000	40.3	0.74
	2001	39.83	0.70
	2002	41.18	0.75
	2003	42.47	0.90
	2004	44.65	0.99
	2005	46.36	0.98
	2006	49.57	1.00
	2007	55.34	1.09
	2008	58.66	1.16
	2009	54.08	1.09
Tunisia	1997	54.39	14.55
	1998	35.32	14.54
	1999	37.80	14.67
	2000	40.3	13.12
	2001	39.83	12.99
	2002	41.18	13.20
	2003	42.47	15.30
	2004	44.65	16.56
	2005	46.36	16.41

Country	Year	PCGDP(i)	PCGDP(j)
	2006	49.57	16.70
	2007	55.34	18.33
	2008	58.66	19.68
	2009	54.08	18.32
Turkey	1997	54.39	71.36
	1998	35.32	41.82
	1999	37.80	24.78
	2000	40.3	17.44
	2001	39.83	8.26
	2002	41.18	7.04
	2003	42.47	7.33
	2004	44.65	8.33
	2005	46.36	9.46
	2006	49.57	9.39
	2007	55.34	10.64
	2008	58.66	10.59
	2009	54.08	8.37
Turkmenistan	1997	54.39	17.15
	1998	35.32	15.23
	1999	37.80	11.74
	2000	40.3	12.40
	2001	39.83	12.9
	2002	41.18	14.82
	2003	42.47	17.41
	2004	44.65	18.60
	2005	46.36	20.40
	2006	49.57	22.75
	2007	55.34	25.44
	2008	58.66	23.11
	2009	54.08	22.18
Uganda	1997	54.39	3.43
	1998	35.32	3.22
	1999	37.80	3.01
	2000	40.3	2.72
	2001	39.83	2.39
	2002	41.18	2.52
	2003	42.47	2.31
	2004	44.65	2.61
	2005	46.36	2.73
	2006	49.57	2.84

Country	Year	PCGDP(i)	PCGDP(j)
	2007	55.34	3.06
	2008	58.66	3.38
	2009	54.08	3.12
United Arab Emirates	1997	54.39	176.91
	1998	35.32	174.51
	1999	37.80	171.50
	2000	40.3	170.32
	2001	39.83	163.56
	2002	41.18	160.05
	2003	42.47	170.46
	2004	44.65	179.52
	2005	46.36	186.93
	2006	49.57	195.84
	2007	55.34	201.55
	2008	58.66	206.64
	2009	54.08	199.48
Uzbekistan	1997	54.39	6.23
	1998	35.32	4.48
	1999	37.80	3.5
	2000	40.3	1.89
	2001	39.83	1.07
	2002	41.18	0.61
	2003	42.47	0.50
	2004	44.65	0.51
	2005	46.36	0.49
	2006	49.57	0.48
	2007	55.34	0.50
	2008	58.66	0.51
	2009	54.08	0.48
Yemen	1997	54.39	0.88
	1998	35.32	0.87
	1999	37.80	0.76
	2000	40.3	0.74
	2001	39.83	0.72
	2002	41.18	0.70
	2003	42.47	0.67
	2004	44.65	0.67
	2005	46.36	0.66
	2006	49.57	0.65
	2007	55.34	0.64

| | 2008 | 58.66 | 0.64 |
| | 2009 | 54.08 | 0.64 |

Source: International Monetary Fund. Retrieved on 9 April 2011 at http//:www.imfstatistics.org

Appendix 8

A Main Indicator of OIC Countries (Distance in Kilometers: From Malaysia, Kuala Lumpur, KLIA to Capital City of Respective Countries)

Country	DISTANCE
Afghanistan	4837
Albania	9104
Algeria	10561
Azerbajian	6817
Bahrain	6013
Bangladesh	2595
Benin	10982
Brunei	1483
Burkina Faso	11377
Cameroon	10214
Chad	9582
Comoros	6674
Cote D'ivoire	11850
Djibouti	6537
Egypt	7956
Gabon	10282
Gambia	12988
Guinea	19804
Guinea-Bissau	12901
Guyana	17564
Indonesia	1175
Iran	6290
Iraq	6813

Country	DISTANCE
Jordan	7548
Kazakhstan	5073
Kuwait	6351
Kyrgyzstan	5159
Lebanon	7630
Libya	9685
Maldives	3190
Mali	11480
Mauritania	12807
Morocco	11505
Mozambique	8097
Niger	10972
Nigeria	10935
Oman	11223
Pakistan	4496
Qatar	5892
Saudi Arabia	6339
Senegal	13047
Sierra Leone	12701
Somalia	6265
Sudan	7684
Suriname	17240
Syria	7549
Tajikistan	5152
Togo	11139
Tunisia	9937
Turkey	7990
Turkmenistan	5851
Uganda	7712
United Arab Emirates	5522
Uzbekistan	5329
Yemen	6329

Source: An Indonesian website. Retrieved on 9 April 2011 at http//:www.indo.com/distance