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AN ANALYSIS OF FOREIGN TRADE AND ECONOMIC GROWTH IN AZERBAIJAN

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ABSTRACT
Master Thesis
An Analysis of Foreign Trade and Economic Growth in Azerbaijan
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The relationship between export performance and economic growth, and the role of exports in economic growth is a popular debate subject among development economists. Theoretically, exports are expected to increase economic growth by generating a greater capacity utilization; achieving technological progress; creating employment and increasing labor productivity; increasing specialization; improving allocation of scarce resources in the economy; relaxing the current account pressures by increasing the country's external earnings and attracting foreign investment; increasing total factor productivity and consequently the welfare of the country.

The aim of this study is to test the export-led growth hypothesis for the Republic of Azerbaijan. Azerbaijan is an oil-exporting country and the share of oil and oil products in total exports is 96 percent in 2008. This export structure is an indication of small-scale production of other goods in Azerbaijan that are expected to compete in world markets. Dependence of exports on oil can make Azerbaijan face the "Dutch Syndrome". Therefore, development of non-oil sectors of Azerbaijan must be in focus.

In this thesis, the export-led growth hypothesis is tested for Azerbaijan using cointegration and error correction model techniques for the 1996-2008 period. Long-run and short-run relationship was found between real GDP, and exports and imports. The results fail to find any support for the proposition that

exports Granger cause GDP. However, real GDP Granger causes exports. The findings of this study showed that export-led growth hypothesis is not valid for Azerbaijan.

The increasing foreign capital inflows to the Azerbaijan's oil sector partially explain the causality from real GDP to exports. The share of foreign capital in oil sector is remarkably high in Azerbaijan. Signing of "Contract of the Century" regarding the production of oil in the Caspian Sea in 1995, and construction of the "Baku-Tbilisi-Jeyhan" oil pipeline between 2002 and 2005, increased the volume of foreign capital inflows to the country. These capital inflows increased oil production and productivity in the sector and GDP of Azerbaijan.

Keywords: Azerbaijan, Exports, Imports, GDP, Cointegration, Granger Causality Test, Error Correction Model.

ÖZET

Yüksek Lisans Tezi

Azerbaycan'da Dış Ticaret ve Ekonomik Büyümenin Analizi

Elnur ALAKBAROV

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İhracat performansı ve ekonomik büyüme arasındaki ilişki ve ihracatın ekonomik büyüme üzerindeki rolü, kalkınma iktisatçıları arasında yaygın bir tartışma konusudur. Teorik olarak ihracatın, daha büyük kullanım kapasitesi yaratarak; teknolojik gelişmeyi gerçekleştirerek; istihdam yaratarak ve emeğin verimliliğini arttırarak; uzmanlaşmayı artırarak; ekonomideki kıt kaynakların kullanımını etkinleştirerek; ülkenin döviz kazançlarının ve yabancı sermaye girişlerinin arttırılması yoluyla cari işlemler dengesi açıklarını hafifleterek; toplam faktör verimliğini ve dolayısıyla ülkenin refahını yükselterek ekonomik büyümeyi artıracağı beklenmektedir.

Bu çalışmanın amacı, Azerbaycan Cumhuriyeti için ihracata dayalı büyüme hipotezinin test edilmesidir. Azerbaycan petrol ihracatcısı bir ülkedir, ve petrol ve petrol ürünlerinin toplam ihracattaki payı 2008 yılı için yüzde 96'dır. Bu ihracat yapısı, dünya piyasalarında rekabet etmesi beklenen diğer malların küçük ölçekte üretiminin yapıldığının göstergesidir. İhracatın petrole bağlı olması Azerbaycan'ın "Hollanda Sendromu" ile yüzleşmesine neden olabilir. Bu yüzden Azerbaycan'da petrol-dışı sektörlerinin geliştirilmesine odaklanılmalıdır.

Bu tezde eşbütünleşme ve hata düzeltme teknikleri kullanılarak 1996-2008 dönemi için Azerbaycan örneğinde ihracata dayalı büyüme hipotezi test edilmektedir. Reel GSYİH, ve ihracat ve ithalat arasında uzun ve kısa dönemde bir

ilişki bulunmuştur. Sonuçlar ihracatın GSYİH'da artışlara yol açtığı şeklindeki hipotezi doğrulamamaktadır. Diğer taraftan reel GSYİH ihracat artışlarına neden olmaktadır. Bu çalışmanın bulguları ihracata-dayalı büyüme hipotezinin Azerbaycan için geçerli olmadığını göstermektedir.

Azerbaycan için reel GSYİH'dan ihracata doğru bir nedensellik ilişkisinin bulunması kısmi olarak petrol sektörüne yönelik gerçekleşen büyük sermaye akımları ile açıklanabilir. Azerbaycan petrol sektöründe, yabancı sermayenin payı oldukça yüksektir. Hazar Denizinde petrol üretilmesine ilişkin "Asrın Anlaşması"nın imzalanması ve 2002 ve 2005 yılları arasında "Bakü-Tiflis-Ceyhan" boru hattının yapımı ülkeye yabancı sermaye girişlerinin artmasına yol açmıştır. Bu sermaye akımları, petrol üretimini, sektörel verimliliği ve GSYİH'i arttırmıştır.

Anahtar Kelimeler: Azerbaycan, İhracat, İthalat, GSYİH, Koentegrasyon, Granger Nedensellik Testi, Hata Düzeltme Modeli.

AN ANALYSIS OF FOREIGN TRADE AND ECONOMIC GROWTH IN AZERBAIJAN

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LIST OF ABBREVIATIONS

ADF	Augmented Dickey-Fuller Test
ADL	Autoregressive Distributed Lag
AIC	Akaike Information Criterion
ASEAN	Association of Southeast Asian Nations
BSEC	Organization of the Black Sea Economic Cooperation
CIS	Commonwealth of Independent States
DF	Dickey-Fuller Test
DW	Durbin-Watson
ECM	Error Correction Mechanism
ECO	Economic Cooperation Organization
EG	Engle-Granger two-step procedure
e.g.	exempli gratia (for example)
ERDB	European Reconstruction and Development Bank
ESCAP	Asia-Pacific Economic Cooperation
EU	European Union
EY	Engle-Yoo Third-Step Procedure
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product
GNP	Gross National Product
GH	Gregory-Hansen test
GUAM	Organization for Democracy and Economic Development
IDA	International Development Association
IDB	Islamic Development Bank
IFAD	International Fund for Agricultural Development
IMF	International Monetary Fund
IPF	Impulse Response Function
KPSS	Kwiatkowski, Phillips, Schmidt and Shin Test
LDCs	Less Developed Countries

LM	Lagrange Multiplier
LP	Lumsdaine-Papell Two-Break Test
MENA	Middle East and North American Countries
NICs	Newly Industrialized Countries
OECD	Organization for Economic Cooperation and Development
OIC	Organization of the Islamic Conference
OLS	Ordinary Least Squares
OPEC	Organization of Petroleum Exporting Countries
PP	Phillips-Perron Test
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNIDO	United Nations Industrial Development Organization
UNDP	United Nations Development Program
USD	United States Dollar
USSR	Union of Soviet Socialist Republics
VAR	Vector Autoregressive
VECM	Vector Error Correction Model
WB	World Bank
WTO	World Trade Organization
ZA	Zwiot-Andreas One-Break Test

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INTRODUCTION

The relationship between exports and economic growth is one of the broad and recurrent issues in economics. Export-led growth hypothesis postulates that exports stimulate economic growth through stimulating industries in which developing countries are likely to have a comparative advantage; allowing developing countries to take advantage of economies of scale by providing larger markets to sell; imposing a competitive discipline on domestic firms that forces and stimulating them to increase efficiency; increasing employment; stimulating technological improvements in response to competition abroad.

The main purpose of this study is to test whether the export-led growth hypothesis is valid for Azerbaijan, using quarterly data over the period 1996-2008. Also the study investigates the structure of Azerbaijan's foreign trade.

Analysis of the relationship between foreign trade and gross domestic product (GDP) is particularly important for an oil-exporting country. An oil-export boom, besides increasing economic growth, also leads to increased levels of consumption which is satisfied through higher levels of imports. Sustainability of these imports, and welfare of nation, depends on country's long-term export performance.

If we look at the structure of Azerbaijan's foreign trade, we can see that major part of the exports (96 percent) is crude oil. Dependence of exports on oil and considerable small weight of manufactured products in total exports, prove the necessity of researching export-GDP relationship. Increasing foreign exchange reserves through exports also enable the country to increase imports. The share of manufactured goods in total imports of Azerbaijan is 64 percent. A fall in export revenues will risk the sustainability of these imports.

The contribution of this thesis to existing literature is that it is the first work examining the causality relationship between real GDP, and exports and imports for Azerbaijan using cointegration techniques and error correction modelling.

This thesis consists of three chapters. The aim of the first chapter is to give theoretical and empirical information about trade and economic growth nexus. In this chapter the major industrialization strategies (import substitution and export-led growth strategies) will be analyzed from the foreign trade point of view. Besides, in this chapter the relationship between exports and economic growth will be investigated theoretically. Finally, a brief summary of the empirical literature on the relationship between exports and economic growth in developing countries will be presented.

The second chapter analyses the foreign trade policy of the Republic of Azerbaijan, its main priorities, and normative-legislative base of foreign trade in Azerbaijan. Also dynamics, structure, and geographical distribution of Azerbaijan's foreign trade will be investigated, and optimization of the foreign trade structure of Azerbaijan is discussed.

Chapter 3 empirically analyzes the impact of exports and imports on real GDP of Azerbaijan, using quarterly data over the period 1996-2008. Consequently, how changes in exports and imports affect economic growth will be tested. After defining basic concepts and methodology, stationarity of data will be analyzed, and cointegration and causality analyses between the series will be presented.

CHAPTER 1

ECONOMIC GROWTH AND FOREIGN TRADE POLICIES

In this chapter first the major industrialization strategies will be analyzed from the foreign trade point of view. One of the most debated issues for a developing country is to decide the most appropriate industrialization strategy that would be applied for economic development. In the viewpoint of foreign trade, industrialization strategies are divided into two types: import substitution industrialization (inward-oriented strategy) and export-led growth (export-oriented) strategies. In this section, the major characteristics of these strategies will be discussed. Secondly, the role of exports on economic growth, on which this study focuses, will be investigated theoretically.

1.1. AN ANALYSIS OF MAJOR INDUSTRIALIZATION STRATEGIES

Strategy is a general model or approach; and is more comprehensive than policy. A strategy can be implemented only with the mediation of the harmonious policy (Seyidoğlu, 2007:513).

Economic policies implemented in developed and developing countries were considerably affected by the 1929 Great Depression and by the World War II. During these periods some critical industry goods were not provided by importing; that's why some developing countries began to substitute these imported goods through domestic production. In this way, widespreading inward-oriented industrialization became a development strategy.

Import substitution strategy was famous in 1960s and 1970s. Especially after the oil crises during 1970's, most countries extensively implementing import-substitution have stopped this strategy and began to implement new alternative strategy – export-oriented growth. Nowadays barely any country implement import substitution strategy purely.

Import substitution and export-led growth strategies were not equally successful on implementing countries. Krueger (1990) explained these differences in performance of economies by three sets of factors. The three sets of factors are:

- Technological factors,
- Economic factors,
- Politico-economic factors.

Technological factors include the nature of production, economies of scale, infant industry factor, and the capital intensity of domestic production. Economic factors relate to such phenomena as peoples' response to incentives and direct controls, the impact of industry structure on behavior, and the flexibility of the economy. Politico-economic factors refer to the factors that influence decision making or altering economic policies (Krueger, 1990:159). Since the countries are not identical with respect to these factors, they ended up with different outcomes.

The import substitution and export-led growth strategies are discussed in detail below, for a better understanding.

1.1.1. Import Substitution Strategy

Import Substitution Strategy became popular after World War II, and applied by many developing countries until 1970s. In this period many developing countries attempted to accelerate their development and to achieve economic growth using this strategy. The strategy is inward-oriented because trade and industrial inducements support production for the domestic market over the export market (Carbaugh, 2001).

Under the policy of import substitution, a country imposes trade policy tools extensively to protect domestic industries from import competition. To this end, high tariffs and quotas are widely used by developing counties. In addition to these trade policy tools, revaluation of the exchange rate is commonly used to restrict imports. In

order to stimulate domestic production governments also use lower credit rates, tax exemptions, infrastructure investments, and other incentive tools (Çarıkçı, 1983:19).

Generally, the country implementing import substitution strategy starts by producing nondurable consumer goods, because such goods require labor-intensive and unsophisticated production techniques. After completing this easy stage, further import substitution becomes increasingly difficult. There have two ways to continue industrialization after this stage. One of them is to opening economy to foreign competition. For example, South Korea and Taiwan have began with import substitution and then turned to export-oriented strategy. The second way is to turn to the final processing of assembly-type commodities, limiting imports of these final products and increase intermediate and capital goods production. To this end, the protective structure is intensified by the degree of processing, with final goods protected at a higher degree than intermediate goods (Kreinin, 1987). Turkey and most of other developing countries have chosen this strategy (Seyidoğlu, 2007).

Import-substitution policy has some attractive aspects for developing countries. Carbaugh (2001: 250) listed the advantages of this protection policy as follows:

1) The risk of establishing a domestic industry to replace imports is low because the market for industrial product already exists, as evidenced by imports.
2) It is easier for the developing country to protect its domestic market against foreign competition than to force developing countries to reduce their trade restrictions on manufactured products exported by the developing country.
3) After implementing import tariffs, foreign firms have incentive to establish so-called "tariff factories" in the country to overcome the tariff barriers; thus unemployment can be reduced.

In contrast to these advantages, this strategy also has some disadvantages for the developing countries. Some of these disadvantages are listed by Salvatore (1998: 344) as:

1) As trade restrictions protect domestic industries from foreign competition, they have no incentive to become more efficient.

2) The small size of the domestic market in many developing countries does not allow manufacturers to take advantage of economies of scale; thus import substitution leads to inefficient industries and high unit costs.

3) After replacing the simpler manufactured imports by domestic production, the higher protection and inefficiency cause import substitution to become more and more difficult and costly; because more capital-intensive and technologically advanced imports have to be replaced by domestic production.

Advantages and disadvantages of the import-substitution strategy show that some developing countries can succeed and some of them can backfire while implementing this strategy, also there can be some differences among implementations.

The import substitution strategy implemented by Brazil and Mexico can be described as policies through which developing countries changed from being primary commodities exporters to exporters of developing indigenous industrial based commodities (Balaam and Veseth, 2008: 318). By 1950s, these countries were promoting local manufacture of consumer goods and reducing foreign imports by protectionism. From 1960s Brazil and Mexico entered the next stage of the import substitution. This stage involved expanding the production of labor-intensive consumer goods together with starting manufacture of capital intensive goods.

The results of the import substitution strategy in following years were not as good. The strategy of borrowing from abroad for extending domestic industry caused high foreign debt. Also import-substitution policy backfired on some sectors. For example, in 1991, Brazilian government realized that this strategy had negative effects on computer industry (Carbaugh, 2001).

East Asian developing countries followed a different way of import-substitution strategy. At the first stage they protected the infant industries, and after achieving

industrial growth by the late 1960s they began moving to export-promotion strategy. By the early 1990s the economies of the East Asian "Tigers" (Hong Kong, Singapore, South Korea and Taiwan) and the "Little Dragons" (Indonesia, Malaysia, the Philippines and Thailand) followed a dynamic growth path (Balaam and Veseth, 2008).

In some countries such as Argentina, India, Nigeria and Pakistan, during import-substitution periods the rate of protection was very high. This led to very inefficient domestic industries and very high prices for domestic consumers. Also the value of the imported inputs was higher than the value of the produced output (Salvatore, 1998).

The effort to stimulate industrialization through import-substitution strategy also led to disregard of agricultural and other primary sectors, resulting declines in the earnings of developing countries from traditional exports. Some of the countries began to import agricultural products that before they had exported. The overall result was that those developing countries (such as Argentina, India, Nigeria and Pakistan) that stimulated industrialization through import-substitution policies grew at a much slower rate than those developing countries that implemented export-promotion after 1960s (Salvatore, 1998).

From these experiences, we can conclude that import-substitution policies can be useful for the less developed countries with a large domestic market, at least in the first stage of the development. In the next stages, it is essential to leave this policy and to turn towards export-promotion. That's why it can be said that these two strategies, beginning from inward-oriented industrialization pursued by outward-orientation, follow and complement each other (Seyidoğlu, 2007).

1.1.2. Export-Led Growth Strategy

Starting from 1980s, many developing countries that had earlier followed an import substitution strategy, began to liberalize their trade and adopt outward-oriented policies. In the literature, these outward-oriented policies are named as "export-led

growth", "export-oriented strategy", and "export promotion". The strategy is outward-oriented because it links the domestic economy to the world economy, and aims to reap benefits of free trade and international specialization. This strategy aims to promote economic growth through the exportation of manufactured goods (Carbaugh, 2001).

According to the Heckscher-Ohlin model, developing countries should specialize in industries that use intensively the relatively abundant resource of these countries such as labor and natural resources. Specialization in labor-intensive industries can also relieve unemployment problems in these countries.

Effects of the export-oriented policies can be seen in the export revenues of the country. An expansion in the export volume generally increases the foreign exchange income of the country. But at the same time, as export-oriented policies are implemented with the liberal foreign trade policies, imports of the country also increases. In this regard, there maynot be any improvement in the balance of payments of the nation (Seyidoğlu, 2007).

We can shortly describe the advantages of export-oriented strategy as following:

1) Export-oriented strategy stimulates and induces industries in which developing countries are likely to have a comparative advantage, such as labor intensive manufactured commodities (Carbaugh, 2001).

2) By decreasing import restrictions, this strategy imposes a competitive discipline on domestic firms that forces and stimulates them to increase efficiency (Hatemi and Irandoust, 2000).

3) In labor-abundant countries, export-oriented strategy contributes to increased employment (Balassa, 1978).

4) The expansion of manufactured exports is not limited by the growth of the domestic market (Salvatore, 1998:346).

5) Exports promote the exploitation of economies of scale for small open economies (Helpman and Krugman, 1985). Consequently, it will lead

increase in the value of production and decrease costs in the economy. Additionally, widening market promotes foreign investment and capital.

6) An increase in exports may loosen a binding foreign exchange constraint and allow increases in productive intermediate imports and hence result in the growth of output (Jung and Marshall, 1985).

7) Exports stimulate the diffusion of technical knowledge, in the long-run, through foreign buyers' suggestions and learning by doing (Grossman and Helpman, 1991).

Balassa (1978) states that some of these advantages (like increase in employment) are once-for-all gains, while some of them (such as technological change) have a continuing effect.

In spite of these advantages, in the literature some disadvantages of this strategy are also presented:

1) It can be very difficult for a developing country to establish export industries; these industries will be faced by the competition of the established and more efficient industries of developed countries.

2) Usually, developed countries provide protection for the labor-intensive industries in which developing countries can obtain a comparative advantage (Salvatore, 1998).

There are some prominent characteristics that differ these two strategies from each other (Krueger, 1990):

▪ Import substitution strategy usually have strict and long licensing procedures for imports of manufactured products; export-oriented regimes enable, at least to exporters, easy access to imports of intermediate and capital goods.

▪ Import substitution strategy is applied with overvalued exchange rates. As domestic producers would receive a substantially low price for their products in the international market than they receive behind the protection wall, it rarely induces them to increase their production beyond the domestic

demand. Export-oriented strategy is characterized by realistic and/or undervalued exchange rates and provides incentive for domestic producers to sell abroad.

- Import substitution strategy is characterized by quantitative restrictions and tariffs on importation of many goods; export-oriented regime generally avoid such restrictions and use normally low tariffs with relatively simple procedures to permit exporters access to the world market at world prices for their inputs.

- The main idea behind the import substitution policies in many developing countries is to stimulate industrial growth. But industrial growth rate appears to be higher under export-oriented policy (Krueger, 1990:158).

- Countries that implement import substitution aim to reduce their dependence on the international markets. For sustaining growth and production, import substitution requires both importation of intermediate and capital goods; that's why actually it appears to increase their dependence.

- There are also differences in launching and following these strategies. To launch import-substitution policy is relatively easy; because at the beginning it requires straight forward regulations, strict restrictions and prohibitions in imports. However in the following stages, as investments increase, it becomes difficult and costly to regulate and sustain this policy. On the contrary, it is difficult to start an export-oriented strategy; as it requires a combination of policies. However, after launching export-oriented policy it becomes more likely to be self-sustaining.

In order to analyze the economic performances of the countries that applied different industrialization strategies, World Bank (1987) conducted a research. In this study information for the period 1963 to 1985 has been collected for forty-one countries. Then using this information the countries were divided into 4 groups: "strongly outward-oriented," "moderately outward-oriented," "strongly inward-oriented," and "moderately inward-oriented" economies. Also Carbaugh (2001), using this method collected information for the period 1986-1992. Results of these two studies are

presented in Figure 1.1. This figure provides real GDPs of the forty-one countries, grouped by the strategies defined above.

Figure 1.1: Real GDP Growth According to Trade Orientation
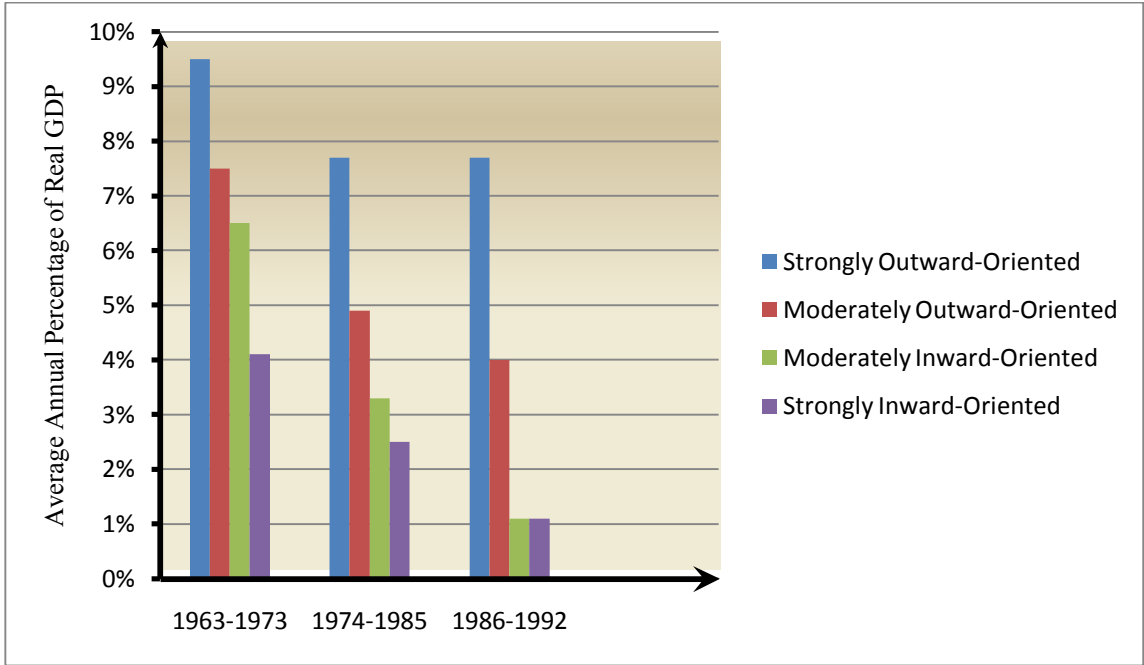
The figure suggests that the economic performance of the outward-oriented economies has been broadly superior to that of the inward-oriented economies. Growth rates of real GDP show a clear descending pattern from the strongly outward-oriented to the annual growth rate inward-oriented economies. For the 1963-1973 period the average was 9.5 percent for the strongly outward-oriented group, whereas it was only 4.1 percent for the strongly inward-oriented group. The respective rates for these two groups for the 1973-85 (7.7 percent and 2.5 percent) and 1986-1992 (7.7 percent and 1.1 percent) periods have shown that the gap has widened.

These findings suggest that outward orientation is more suitable than inward-oriented strategies for developing countries. A reason for such conclusion is that outward orientation may lead to a more equal income distribution though generating

employment opportunities via expansion of labor-intensive exports. Also export orientation rarely faces with foreign-exchange shortages (Appleyard et al, 2006: 427).

1.2. THE EFFECTS OF EXPORTS ON ECONOMIC GROWTH

The linkage between export performance and economic growth and the role of exports in economic growth is a popular debate subject among development economists. The relationship between exports and growth is expected to be bidirectional (Ram, 1987). It means that exports may affect growth; and also growth may affect exports.

Purchasing of domestically produced goods and services by foreign countries are called exports. In other words, exports are expenditures which foreign countries pay for domestic goods and services. Exports contribute to the country's GDP. From the Keynesian model we can easily see the effect of exports to GDP:

$$Y = C + I + G + (X - M) \qquad (1.1)$$

where Y is income (GDP); C is consumption; I is investment; G is government expenditures; X and M are exports and imports, respectively. The equation (1.1) shows that export growth represents an increase in the demand for country's output, and thus serves to increase the GDP of the country. Both share of exports in GDP and the growth of exports are important for overall growth performance of a country (Thirlwall, 2002).

Feder (1982) was the first researcher who established a formal model on the GDP-exports relationship. In Feder's (1982) model production function is indicated by three terms: the growth of exports, the share of exports in GDP, and a coefficient combining the differential productivity and externality effects:

$$g = \alpha(I/Y) + \beta \ (dL/L) + [\delta(1+\delta) + F_x](X/Y)(dX/X) \qquad (1.2)$$

where I/Y is the ratio of investment to income which is used as a proxy for capital accumulation; dL/L is the growth of labor force; X/Y is the share of exports in GDP; dX/X is the growth rate of exports; $\delta(1+\delta)$ measures the differential productivity effect

between the two sectors and F_x shows the externality effect. Feder analyzed the model across 31 countries for the period from 1964 to 1973, first without including export growth component and then with including the export growth. Inclusion of dX/X considerably increased the explanatory power of the model. Then for isolating the externality effect, the share of exports in GDP (X/Y) was kept out of the model. The difference between the total export effect on growth and the externality effect is the differential productivity effect. According to the findings of the Feder's (1982) study, there is evidence of both externality and differential productivity effects, and marginal factor productivities are higher in export industries than in non-export industries.

The classical trade theory argues for free trade and adduces that, developments in the export sector positively effects the country's economic growth; and foreign trade (especially exports) is "the engine of growth". Awokuse (2008) showed three ways in which exports can be considered as an engine of growth. First, export growth can be an accelerator for output growth directly as a component of aggregate output. An increase in foreign demand for domestic exportable products can cause an overall growth in output via an increase in employment and income in the exportable sector. Second, export growth can also affect economic growth indirectly through various ways such as: greater capacity utilization, efficient resource allocation, utilization of economies of scale and inducing technological improvement because of foreign market competition. At last, export growth provides foreign exchange, which increases imports of intermediate goods that in turn raises capital formation and thus stimulate economic growth.

Export growth can lead country to obtain foreign exchange income. This foreign exchange can provide imports of capital goods which, especially in developing countries, cannot be produced within the country, but is important for achieving particular industrialization and development level (Kugler, 1991).

Empirical investigations indicate that export growth affects economic growth more effectively through manufactured exports than traditional exports. Manufactured exports accelerate economic growth and technological progress by promoting closer

linkages with international firms, fostering economic specialization, encouraging high rates of investment into profitable economic activities, and providing foreign exchange to finance imports of capital goods which cannot be produced locally (Radelet, 1999).

Radelet (1999) showed the channels through which manufactured exports contribute to sustainable economic growth. One of the great contrasts of import substitution is that even though this strategy is designed to save foreign exchange, the large majority of countries which followed this strategy in the end are faced with balance of payments problems because they could not generate the foreign exchange earnings necessary to pay for the imports of raw materials and capital goods they needed. Second, exporters of manufactured products can increase their specialization at a higher degree than when compared to import substitution. Third, manufactured exports allow firms to operate in larger market. Fourth, manufactured exports stimulate technological progress. Growth in manufactured exports requires close connections with multinational firms that provide capital goods, intermediate inputs, technology, and markets. This contribution is essential for a developing country as it may not generate all of the complicated capital goods and technology needed for high-quality investment projects by itself.

Besides the economists who support economic growth through export growth, there are opponents who judge this view. This group of economists criticizes the classical foreign trade theory from different points of view, and shows that it can be prejudicial to tie economic growth to the exports growth. They argue that it can be needful to appropriate inward-oriented policies in developing countries for accelerating economic development in order promoting exports. For example, economist such as Nurkse, Myrdal, and Singer argue that in nowadays exports is not longer engine of the growth and they oppose to the development of less developed countries through free foreign trade and suggest import-oriented policies. That's why these economists are mentioned as "exports pessimists" (Love, 1994).

One of the most important hypothesizes about the negative effects of exports on economic growth is "immiserizing growth". Immiserizing growth was first proposed by

Jagdish Bhagwati in 1958. According to this hypothesis, if growth is heavily export biased it will lead to a fall in the terms of trade of the exporting country, in rare circumstances this fall in the terms of trade may be so large as to outweigh the gains from export growth, this situation would cause a country to be worse off after growth than before. This result is only valid if the growing country is able to influence world prices or in other words a large country (Krugman and Obstfeld, 2003).

Economic growth also can cause increase in exports. According to growth-led export hypothesis, Vernon (1966) advocates that economic growth in countries can positively affect exports. Growth can increase exports through following ways:

- increases in investment;
- technological development;
- increase in international competitiveness (Jin, 2002: 64).

1.3. EMPIRICAL LITERATURE

In previous part, theoretical relationship between exports and economic growth was presented, in this section empirical evidence of this relationship will be reviewed. There is a large literature on the empirical investigation of the export led growth hypothesis. Therefore in this study the literature review is restricted with studies on developing countries.

The empirical literature that analyze export-led growth hypothesis can be separated into three groups according the methodology used: The first group of studies uses cross-country correlation coefficients to test the export-led growth hypothesis. These studies explained economic growth in terms of export expansion alone, in a two-variable framework. The findings of these studies generally support the export-led growth hypothesis for the analyzed countries; positive and high correlation coefficients are calculated for economic growth and exports.

The second group involves ordinary least squares (OLS) based-regression applications. In most of these studies exports, capital and labor stocks of the countries are included among independent variables. The majority of these studies analyzed developing countries and used OLS results to demonstrate the advantages of the export promotion strategy in comparison with the import substitution strategy.

The third group of studies applied various time series techniques to examine the relationship between economic growth and exports. Most of these studies were published after 1990s and analyzed export-growth nexus for both developed and developing countries. Although almost all cross-sectional analyses find support for relationship between exports and growth, there is not the same degree of agreement in time series analyses.

Below some selected investigations in developing countries and their results have been presented.

Balassa (1978) investigated the relationship between exports and economic growth in eleven developing countries covering the period 1960-1973. During the period analyzed, these countries implemented different industrialization strategies. For example, some of these countries (e.g. South Korea, Singapore and Taiwan) adopted export-oriented policies; some of them (e.g. Chile and India) were pursuing inward-oriented policies. In the study Balassa employed cross-section analysis to examine export-growth nexus, and used two models: The first model estimates the relationship between total exports and GNP; the second model investigates the relationship between the manufactured exports and manufacturing output. For both models a high correlation between exports and GNP were found. Main findings of the study are: 1) export growth favorably affects economic growth; 2) the export-oriented policies are more successful than import-oriented policies; 3) there is a positive correlation between exports and domestic savings.

Jung and Marshall (1985) analyzed the causality between exports and economic growth by using time series analyses for 37 developing countries for the period 1950-

1981. According to the findings of this study, export-led growth hypothesis was found only in Costa Rica, Ecuador, Egypt and Indonesia.

Darrat (1986) examined export-led growth hypothesis for four Asian countries - Hong Kong, Korea, Singapore, and Taiwan for the period 1960-1982. Using Granger causality test, Darrat tried to determine a linkage between exports and economic growth. The findings clearly reject the export-led growth hypothesis in each of the four countries. Only for Taiwan, economic growth unidirectionally causes exports, which is contrary to the export-led growth hypothesis.

Ram (1987) examined export-growth linkage for 88 less developed countries on the basis of annual time-series data. He divides data into two subperiods (1960-1972 and 1973-1982) for covering the eras before and after the "oil shock" of 1973. The results of time-series analysis show that there is positive relationship between exports and economic growth. The cross-section analyses also showed that the impact of exports on economic growth had increased during the 1973-1982 period. The findings of this study support the export led-growth hypothesis but there are important differences for countries.

Greenaway and Sapsford (1994) studied exports-growth linkage in 19 developing countries, and also tested how liberalization may affect this relationship. The study found little support for the export-led growth hypothesis. To examine the effects of liberalization policies, dummy variables were used, but only for four countries, liberalization was found as important for this relationship.

Abhayartne (1996) examined export-growth relationship in Sri Lanka over the period 1960-1992 using cointegration and causality techniques. The findings reject the export-led growth hypothesis for Sri Lanka. Also no causality was found between imports and economic growth, and between exports and imports. Such findings reveal that outward-oriented policies implemented by Sri Lanka did not generate sustained economic growth.

Ghatak, Milner and Utkulu (1997) also used cointegration and causality tests, to investigate the export-led growth hypothesis for Malaysia for the period from 1955 to 1990. According to the findings of this study real export growth Granger causes both real GDP growth and non-export real GDP growth for Malaysia.

Using quarterly data from 1980 to 1996 for Turkey, Yiğidim and Köse (1997) found that there is no causality from exports to GDP in Turkey. The authors suggest that without including imports to the system, standard methods of detecting relationship between export and economic growth may give misleading results. That's why they entered imports and investments as additional variables to the model. But only unidirectional causality from imports to GDP and from imports to investment was found.

Asafu-Adjaye and Chakraborty (1999) examined export-led growth and import-compression hypotheses for Nigeria, India, Papua New-Guinea and Fiji. The data are annual and include 1960-1994 period for Nigeria and India; 1973-1993 for Papua New-Guinea; and 1969-1993 for Fiji. Applying Johansen's multiple cointegration test, cointegration between variables were found. GDP, exports and imports are found to be cointegrated for Nigeria and Fiji; also error correction mechanism (ECM) suggests Granger causality from exports to real GDP and from imports to real GDP for these countries. These unidirectional causalities can be evidence of export-led growth hypothesis for Nigeria and Fiji both in short-run and long-run. But results fail to support export-led growth hypothesis for India and Papua New-Guinea.

Hatemi and Irandoust (2000) investigated the export-led growth hypothesis for Greece, Ireland, Mexico, Portugal and Turkey using data covering period 1960-1997. The results of the study reveal that there is unidirectional causality from exports to output in Ireland and Mexico; unidirectional causality form economic growth to exports in Portugal; no evidence of export-growth relationship in Greece and Turkey. The authors discussed that economic growth leads to improvements in technology and skills which increases economic efficiency and creates a comparative advantage for the country, which at the end facilitates exports.

Afxentiou and Serletis (2000) studied export-growth nexus for 50 developing countries (15 from sub-Saharan Africa, 19 from Latin America and Caribbean, 7 from the Middle East and North Africa, 6 from East Asia and the Pacific, and 3 from South Asia) using annual data for the period 1970-1993. Unidirectional causality from exports to output was found only in Indonesia and Oman which are both oil exporters. In 48 countries, the export-led growth was not valid. Also causality between imports and output growth was only found for Pakistan. For testing whether export or import growth volatility is related to output growth, volatility modeling techniques were employed. Export growth volatility is causally related to output growth in South Africa, Zimbabwe, Indonesia, Argentina, El Salvador, and Oman. On the other hand import growth is causally significant for South Africa, Indonesia, Pakistan, Tanzania, and Venezuela. The overall findings indicate that international trade can contribute to economic development but is not essential; and export growth has not been an engine of growth, even in the cases of the Asian tigers.

Medina-Smith (2001) tested the export-led growth hypothesis for Costa Rica by using annual data for the period 1950-1997. For distinguishing between short-run and long-run effects of exports on economic growth, both the Engle-Granger two-step procedure and the unrestricted error correction model were employed. The study finds that the export-led growth hypothesis is valid in Costa Rica.

Abu-Bader (2001) attempted to analyze a causal relationship between exports and economic growth for some Middle East and North American (MENA) countries. These countries are: Algeria, Egypt, Iran, Israel, Jordan, Morocco, Turkey, Tunisia and Sudan. The author uses both total exports and manufactured exports as a measure of exports. While considering total exports, the results of the study reject export-led growth hypothesis, except for Algeria and Tunisia; on the other hand for Iran, Israel and Turkey results support the growth-led export hypothesis. But while considering only manufactured exports, no causality was found for countries with relatively low share of manufactured exports in total merchandise exports (Algeria, Egypt and Jordan); and a bidirectional causality was found for countries with relatively high shares (Morocco,

Tunisia and Turkey). The findings imply that policy makers should concentrate on promoting manufactured exports to stimulate economic growth.

Vohra (2001) examines the role of export-growth linkage in five developing countries (India, Malaysia, Pakistan, the Philippines and Thailand) over the period 1973-1993. Empirical findings of the study can be summarized as follows: 1) exports have a positive and significant impact on economic growth if the country has achieved some level of economic development; 2) liberal and free market policies (as in Malaysia, the Philippines, and Thailand) should be followed to realize an export expansion and to attract foreign investments which are expected to contribute to economic growth.

Howard (2002) studied the relationship between exports, imports and income for Trinidad and Tobago, for the period from 1968 to 1997. Results of this study show that there is a unidirectional Granger causality from exports to real GDP; and bidirectional causality between exports and imports, and imports and real GDP. Howard (2002) indicates that the reason of this conclusion is that Trinidad and Tobago is an export-propelled economy and a boom in exports of petroleum causes increased income and spending in the non-tradeable sector of the economy.

Sharma and Panagiotidis (2003) studied export-led growth hypothesis for India for the period 1971-2001 using Feder's model. The results reject the export-led growth hypothesis for India and despite export promoting reforms, some characteristics of an import substituting economy still retains.

Abual-Foul (2004) investigated the relationship between exports and economic growth for Jordan over the period 1976-1997. The results reveal a one-way causality relationship running from exports to output. The findings of the study support the export-led growth hypothesis for Jordan; and provide that the government of Jordan should continue promoting exports to achieve faster economic growth.

Siliverstovs and Herzer (2005) examined the export-led growth hypothesis in Chile over the period 1960-2001. The results suggest that there is unidirectional Granger

causality from manufactured exports to GDP; and unidirectional Granger causality from GDP to the primary exports. The results of this analysis show that the impact of manufactured and primary exports on economic growth is different, so while testing the export-led growth hypothesis, one should investigate different export categories.

Love and Chandra (2005) test export-led growth hypothesis for one of the poorest regions of the world - South Asia. The study applies cointegration and error-correction modeling using data for period 1950-2000. The results present fairly mixed conclusions, and does not find any convincing proof in favor of export-led growth. There was evidence of unidirectional causality from exports to economic growth in India, Maldives and Nepal; unidirectional causality from economic growth to exports in Bangladesh and Bhutan. But no causality between exports and economic growth was found in Pakistan and Sri Lanka. The mixed conclusion of the study is plausible as these economies, generally, have been characterized by inward-orientated planning which gave supremacy to import substitution over export promotion. The effect of import-substitution strategy has been so deeply rooted that liberal regimes implemented in 1980s and 1990s could not change this structure easily.

Taban and Aktar (2005) tested export-led growth hypothesis for Turkey using data from 1923 to 2003. After applying two step Engle-Granger procedure and Johansen test, a long-run relationship between exports and economic growth could not been found for Turkey.

Abou-Stait (2005) examined the applicability of export-led growth paradigm for Egypt, using data from 1977 to 2003. The analysis is extended to include impulse response functions to investigate the response of the system to macroeconomic shocks. The results show that shocks to exports cause significant responses in GDP, which in return supports the export-led growth hypothesis. The findings imply that government should imply further trade liberalization, further tariff revisions; abolish non-tariff barriers on imports and exports; improve exchange rate policies; and build up an efficient service infrastructure.

Jordaan and Eita (2007) analyzed the causality relationship between exports and GDP of Namibia over the period from 1970 to 2005. The results show that there is unidirectional causality relationship from exports to GDP and GDP per capita; and bidirectional causality between exports and imports. This evidence provides that the export-led growth strategy has a positive long-run influence on growth in Namibia.

Kagnew (2007) investigated the relationship between export performance and economic growth in Ethiopia using cointegration and vector error correction model. The results demonstrate that there is a long run equilibrium relationship among variables and there is causality between exports and economic growth in at least one direction. The relationship between exports and economic growth holds in spite of the Ethiopian export basket is dominated by traditional primary goods and in the face of an inward oriented trade strategy.

Kasman and Emirhan (2007) examined export-led and import-led economic growth hypotheses for Turkey, using quarterly data covering the period from 1980 to 2005. Cointegration test analysis, suggests that there is a long-run relationship between exports and income. The results show that there is unidirectional causality from exports to income; there is no causal relationship between imports and income; and there is one-way causal relationship from exports to imports. An interesting fact is that contrary to the findings of previous studies, this study supports the export-led growth hypothesis for Turkey in the sample period.

Awokuse (2008) studied the dynamic relationship between trade and economic growth in Argentina, Columbia and Peru. Quarterly data set covers the periods 1993-2002 for Argentina, 1994-2002 for Colombia and 1990-2002 for Peru. The impulse response functions were used for identifying how shocks to exports and imports affect economic growth and vice versa. The Granger causality tests reveal that the export-led growth hypothesis is not valid in any of the three countries. In contrast, there is bidirectional causality relationship between imports and GDP growth for Argentina and Colombia; unidirectional causality relationship between imports and GDP growth for Peru. The results of the impulse response functions confirm the important role of

imports in motivating economic growth in Latin America. The impulse response analyses also find some support for the export-led growth hypothesis in Argentina and Peru.

Hasan and Abdullah (2008) examine the causal relationship between human capital, exports, and economic growth using data for Pakistan over the period 1975-2005. The authors state that investment in human capital causes growth in physical capital and stimulates exports; and consequently, stimulates economic growth. The results show that in the long run there is a unidirectional Granger causality between human capital and GDP. But no relationship between human capital and exports was found. Therefore, the authors suggest that government of Pakistan should concentrate on developing human capital which will serve as an engine of economic growth.

Another study investigating export-led growth hypothesis for Turkey is Bilgin and Şahbaz's (2009) work. The relationship between exports and growth was analyzed by using 1987-2007 monthly data. The tests results of the study confirm the findings of Kasman and Emirhan (2007), and suggest that export-led growth is valid for the specified period in Turkey.

Bahmani-Oskooee and Economidou (2009) investigated export-led growth hypothesis for 61 countries using annual data over 1960-99 period. The results of the study are country specific and there is no uniform pattern. Overall policy implication of the study is that in developing countries export-led growth strategies and growth oriented policies work together in forcing these developing countries to grow.

In Table 1 a summary of the empirical studies which were presented above are presented.

Table 1.1: A Brief Summary of the Empirical Studies on the Export-Led Growth Hypothesis

Study	Sample	Period	Data set	Methodology		Conclusion
				Econometric Technique	Other Variables	
Balassa (1978)	11 LDCs	1960-1973	Cross-section	Spearman rank Correlation, OLS	Labor, investment	Support for ELG
Jung and Marshall (1985)	37 LDCs	1950-1981	Time series	OLS, Granger causality		Support for ELG only in Costa Rica, Ecuador, Egypt and Indonesia
Darrat (1986)	Hong Kong, Korea, Singapore, Taiwan	1960-1982	Time series	Granger causality test		No support for ELG
Ram (1987)	LDCs	1960-1982	Cross-section 2 subperiods, Time series	OLS, AR procedure	Labor, investment, government size	Support for ELG in most countries
Greenway and Sapsford (1994)	19 LDCs	1957-1985	Time series	OLS	Labor, investment, dummy for liberalization episodes	Weak support for the ELG
Abhayartne (1996)	Sri Lanka	1960-1992	Time series	ADF, Johansen procedure, Wald test	Imports	No support for ELG
Ghatak, Milner and Utkulu (1997)	Malaysia	1955-1990	Time series	ADF, PP, Johansen procedure, ECM, Granger test	Human capital, physical capital	Support for ELG
Yiğidim and Köse (1997)	Turkey	1980-1996	Time series	ADF, VAR, Granger Causality test	Imports, investment	No support for ELG
Asafu-Adjaye and Chakraborty (1999)	Fiji, India, Nigeria, Papua New-Guinea	1960-1994	Time series	DF, ADF, PP tests, Johansen test, EG, EY test, ECM, Granger test	Imports, labor	Support for ELG in Fiji and Nigeria, no support for ELG in India and Papua New-Guinea

Hatemi and Irandoust (2000)	Greece, Ireland, Mexico, Portugal & Turkey	1960-1997	Time series	KPSS, PP unit root test, Granger non-causality procedure		Support for ELG in Ireland, Mexico; support for GLE in Portugal
Afxentiou and Serletis (2000)	LDCs	1970-1993	Time series	ADF, PP, EG two-step procedure, ARCH, Granger causality test	Imports	Support for ELG only in Indonesia and Oman
Medina-Smith (2001)	Costa Rica	1950-1997	Time series	DF, ADF, EG test, Johansen procedure, ECM	Capital, labor	Support for ELG
Abu-Bader (2001)	9 MENA countries	1968-1996	Time series	ADF unit root test, EG two-step procedure, Johansen test, VECM	Imports, real manufactured exports	While using total exports: no support for ELG, support for GLE; While using manufactured exports: support for ELG in some countries.
Vohra (2001)	India, Malaysia, Pakistan, the Philippines and Thailand	1973-1993	Time series	ADF unit root test, EG two-step procedure	Labor, capital	Support for ELG
Howard (2002)	Trinidad and Tobago	1968-1997	Time series	ADF, PP, Johansen procedure, ECM, Granger Causality test	Imports	Support for ELG
Sharma and Panagiotidis (2003)	India	1971-2001	Time series	EG two step procedure, Johansen procedure	Investment, labor	No support for ELG
Abual-Foul (2004)	Jordan	1976-1997	Time series	VAR, ECM, Granger causality test		Support for ELG
Siliverstovs and Herzer (2005)	Chile	1960-2001	Time series	VAR, Toda & Yamamoto procedure	Imports, capital, labor	Support for ELG

Love and Chandra (2005)	7 South Asian countries	1950-2000	Time series	ADF, EG, ECM, Granger causality test		Support for ELG in India, Maldives and Nepal; support for GLE in Bangladesh and Bhutan
Taban and Aktar (2005)	Turkey	1923-2003	Time series	Unit root tests, EG test, Johansen test.		No support for ELG
Abou-Stait (2005)	Egypt	1977-2003	Time series	ADF, Johansen procedure, Granger causality test	Imports, capital	Support for ELG
Jordaan and Eita (2007)	Namibia	1970-2005	Time series	ADF, Johansen procedure, VECM, Granger causality test	Imports	Support for ELG
Kagnew (2007)	Ethiopia	1960-2005	Time series	ADF, Johansen test, VECM	Labor, capital, imports	Support for ELG
Kasman and Emirhan (2007)	Turkey	1980-2005	Time series	ADF, KPSS, ZA, LP, EG, Johansen test, GH test, VECM, Granger causality test	Imports	Support for ELG
Awokuse (2008)	Argentina, Columbia, Peru	1993-2002	Time series	ADF, KPSS, EG, Johansen test, ECM	Imports, capital, labor	No support for ELG; after implying IPF support of ELG in Argentina and Peru
Hasan and Abdullah (2008)	Pakistan	1975-2005	Time series	ADF, PP, Johansen and Johansen & Juselius procedure, Granger causality test	Human capital	Support for ELG
Bilgin and Şahbaz (2009)	Turkey	1987-2003	Time series	ADF test, Johansen test, VECM, Granger causality test	Imports, industrial production index, terms of trade	Support for ELG
Bahmani-Oskooee and Economidou (2009)	61 LDCs	1960-1999	Time series	VAR, Johansen procedure	Imports, labor, capital	Results are country specific and there is no uniform pattern

Notes to Table: ADF – Augmented Dickey-Fuller test; ECM – Error Correction Model; EG – Engle-Granger two-step procedure; ELG – Export-led growth; EY – Engle-Yoo third-step procedure; GH – Gregory-Hansen test; GLE – Growth-led export; IPF – Impulse Response Function; KPSS - Kwiatkowski, Phillips, Schmidt and Shin test; LP – Lumsdaine-Papell two-break test; OLS – Ordinary Least Squares; PP – Phillips-Perron test; VAR – Vector autoregressive; VECM – Vector Error Correction Model; ZA – Zwiot-Andreas one-break test.

CHAPTER 2

STRUCTURE OF FOREIGN TRADE AND FOREIGN TRADE POLICY OF AZERBAIJAN

In this chapter the foreign trade policy of the Republic of Azerbaijan and normative-legislative base of foreign trade in Azerbaijan will be presented. Also dynamics and structure of the Azerbaijan's foreign trade will be investigated.

2.1. FOREIGN TRADE POLICY OF AZERBAIJAN

Foreign trade policy is an important component of the general economic policy. When implementing the foreign trade policy actions, the target of the state is to achieve certain goals. In this part Azerbaijan's foreign trade policy and integration of Azerbaijan's economy to the world economy after the gaining independence will be presented.

2.1.1. Azerbaijan's Integration to the World Economy

Commencement of the independent development of Azerbaijan after the collapse of the Union of Soviet Socialist Republics (the USSR) became a turning point in its social and economic development. Goal-oriented policy was launched in the field of reforms in economy, enlargement of trade and economic relationships with other states, involvement of foreign investment in the country. Under the Soviet Union, Azerbaijan was integrated to the unified "complex of economy"; and foreign economic relationships were under the monopoly of the central government and managed from that level.

After the collapse of the USSR, the foreign trade turned to be a very important factor in the development of Azerbaijan. In this period, Azerbaijan's dependence on foreign markets significantly increased (Nuriyev, 1999).

Priorities of Azerbaijan's foreign trade policy consists of maintaining the country's image as an attractive country for foreign capital, improvement of the structure of exports and imports, development of the non-oil sector through utilization of opportunities abroad, increasing employment in export sectors, preserving the value of the manat, continuation of efficient cooperation with international financial institutions, sustaining control over the level of foreign debts, reduction of Azerbaijan's dependence on foreign capital and oil revenues (Гаджиев, 2000).

Successful completion of transition to a market economy, growth rate of the economy and efficient integration with the world economy requires a maximum degree of liberalization in foreign trade policy. In this regard, the Republic of Azerbaijan tries to liberalize foreign trade policy (Bayramov, 1997).

Currently, Azerbaijan participates in various regional groups in Eurasia to minimize dependency on any geographical region. These regional groups are:

- Commonwealth of Independent States (CIS);
- Economic Cooperation Organization (ECO);
- Organization of the Black Sea Economic Cooperation (BSEC);
- Organization for Democracy and Economic Development (GUAM).

Besides the above regional groupings, integration to the European Union (EU) is an important priority among Azerbaijan's foreign economic policies. Increased integration with EU would enable Azerbaijan to use its available resources more efficiently and would also enable the country gain an improved access to modern technology, investments and foreign capital and also develop a non-oil sector. To this aim, the Action Plan within the framework of European Neighbourhood Policy between the Republic of Azerbaijan and the EU was endorsed in November 2006. Expressing its

strategic interests in the South Caucasus region, the European Union intends to maintain a multilateral cooperation with Azerbaijan, especially in the field of energy. Accordingly, a Memorandum of Understanding on Strategic Partnership in the field of Energy was signed between the Republic of Azerbaijan and the European Union on November 7, 2006.

After gaining independence, Azerbaijan started to sign contracts with Western countries about oil production and transportation of oil. The first contract to be signed was Azeri-Chirag-Guneshli - International Contract signed on September 20, 1994, ratified in Parliament on December 2, and went into effect on December 12. Because of its potential reserves estimated at 6 billion barrels (950,000,000 m^3) of oil, this project is often referred to as the "Contract of the Century". The projected investment for this project is $13 billion. After the contract, in 1995, Azerbaijan International Operating Company (AIOC) was organized and was composed of eleven major international companies: BP (UK), Amoco (US), LUKoil (Russia), Pennzoil, (now Devon of US), UNOCAL (US), Statoil (Norway), McDermott (US), Ramco (Scotland), TPAO (Turkey), Delta Nimir (now Amerada Hess of US), and SOCAR (Azerbaijan).

However, the problem of how to deliver the oil to European markets existed. This problem was solved by the agreement for the construction of the Baku-Tbilisi-Jeyhan pipeline among Azerbaijan, Georgia and Turkey in 1998. The pipeline was officially opened in July 13, 2006 and now transports crude oil 1,760 km (1,094 miles) from the Azeri-Chirag-Guneshli oil field in the Caspian Sea to the Mediterranean Sea.

The Baku-Tbilisi-Jeyhan pipeline is expected to make a major contribution to the world energy supply with its more than 1 million barrels per day capacity. This pipeline may also transport oil from Kazakhstan's Kashagan oil field as well as from other oil fields in Central Asia. The government of Kazakhstan announced that it would build a trans-Caspian oil pipeline from the Kazakhstani port of Aktau to Baku.

Azerbaijan is taking steps for efficient integration to the world economy and multilateral trade system as well as World Trade Organization (WTO), for the purpose

of developing its foreign trade. Azerbaijan aims to become a member of this organization during the upcoming years (Rüstəmov, 2007).

Another aspect of cooperation that the Republic of Azerbaijan pursues with international economic organizations consists of those with specialized the United Nations (UN) agencies on development of industry and agriculture with an international focus. Consequently, cooperation with United Nations Industrial Development Organization (UNIDO), Food and Agriculture Organization of the United Nations (FAO), and International Fund for Agricultural Development (IFAD) is of high importance (Rəcəbli, 2003).

2.1.2. Normative–Legal Base of Public Regulation of Foreign Trade in Azerbaijan

Successful implementation of all activities relating with foreign trade policy requires state regulation of foreign trade. Such issues shall be implemented through passage of statutory acts, and amendments and changes to the statutory acts. For establishing a legal framework for the regulation of foreign trade operations, a number of relevant laws have been passed by the Parliament, presidential decrees have been signed and orders have been issued in Azerbaijan.

In order to determine and to implement trade policies state bodies and institutions have been established. Over 30 laws and several normative-legal acts have been adopted for this purpose. The major of them are presented in the Appendix.

Status of the Ministry of Trade of Azerbaijan was approved by the decision of the President of the Republic of Azerbaijan in June 26, 1997. Later, this ministry was closed down and the Ministry of Economic Development was charged with all operations like implementation of public policy and regulation of relations with international trade organizations. According to the current legislation, the Ministry of Economic Development coordinates activities of other executive bodies in this field.

The Ministry of Economic Development has the following duties: To develop state conception for identifying main principles of trade policy; to participate in organization of activities regarding implementation of public policy in the sphere of commerce; to ensure opportunities of world market goods and services, to forecast its development tendency and to provide the population with necessary information in this regard; to improve regulations of import and export of goods and services within main directives of export policy; to implement mechanism of export expansion (Abdullayev et al, 2006).

The Customs Code is a main document in the regulation of customs issues. The Code expresses the rules for customs clearance, levying customs duties, passage of goods and vehicles through customs borders, customs control and customs policy, and designates customs authorities, delineates the rights and obligations of customs authorities and persons using customs borders, and regulates other fundamental issues related to customs operations.

In Azerbaijan, custom tariffs levies only to imported goods and mainly plays fiscal role. Goods imported into Azerbaijan are subject to import duties (ad valorem duties ranging from 0% to 15%, per unit duties, duties per metric units). Excise tax applies to oil, tobacco and alcohol products. According the free trade agreement with countries of the CIS that signed in 1993, there is no custom duty implementation to the goods imported from the CIS countries.

From 1997 the Republic of Azerbaijan does not implement any export duties, except for certain types of metals and metal products. Also except oil sector, there is no specific trade policy in other spheres of economy in Azerbaijan. Only some type of goods must be licensed before export and import. According to the Decree of the President of the Republic of Azerbaijan No. 782 "On Improvement of Regulations of Issuing Special Permits (Licenses) for Certain Types of Activities" dated September 2, 2002, goods that must be exported and imported under license issued by the Ministry of Economic Development of the Republic of Azerbaijan decreased from 240 to 30. In

foreign trade, licenses are applied only for ethyl alcohol, strong (alcohol) drinks (except for beer) and tobacco goods. Also exportation of weapons and defense technologies, nuclear materials, radioactive emanation sources, drugs, psychotropic materials, toxins, wild animals, snake and scorpion poisons, caviar, works of art, collections, and antique goods require conformity and opinion of relevant state institutions. In other operations the Republic of Azerbaijan removed license conditions.

2.2. STRUCTURE OF FOREIGN TRADE OF AZERBAIJAN

The aim of this part is to investigate the dynamics and geographical distribution of the foreign trade relations of Azerbaijan.

2.2.1. Dynamics of Azerbaijan's Trade

Foreign trade links of Azerbaijan can be divided into two symbolic levels:
1. Trade relations of Soviet Azerbaijan before gaining independence;
2. Trade relations of independent Republic of Azerbaijan.

In first case trade relations of Azerbaijan can be approached from two aspects:

- Azerbaijan had broad mutual trade and economic relations with other Soviet Republics. But these relations were of inter-Soviet Union nature and they were evaluated in terms of requirements of unified economy rather than the economic interests of separate Soviet Union member republics. So these relations cannot be analyzed within the context of international trade theory.

- During these periods Soviet Republics and Azerbaijan established relations with third countries. Some part of Azerbaijan's industrial production used to be exported to these countries. But Azerbaijan was not participating in these trade relations as an independent state that is trying to maximize economic

interests. Under the USSR regime the foreign trade was under the control of the state.

In the Table 2.1 Azerbaijan's foreign trade numbers are presented for the 1988-1992 period.

Table 2.1: Foreign Trade of Azerbaijan (Million rubles): 1988-1992

Years		Soviet Republics	Other Countries	Total
1988	Exports	6357	424	6781
	Imports	4258	1414	5672
	Balance	2099	-990	1109
1989	Exports	6674	448	7122
	Imports	3794	1395	5189
	Balance	2880	-947	1933
1990	Exports	6104	325	6429
	Imports	4247	1504	5751
	Balance	1857	-1179	678
1991	Exports	11455	744	12199
	Imports	8836	2173	11009
	Balance	2619	-1429	1190

Source: The Ministry of Foreign Affairs of the Republic of Turkey. Azerbaijan Country Report №32.

As it is clearly seen from the Table 2.1, share of Soviet Union member republics was approximately 90 percent in the foreign trade operations of Azerbaijan. Another important point that can be followed from the table is that Azerbaijan had positive balance in foreign trade. The main reason for this positive balance is that, before gaining independence, Azerbaijan was an important oil exporter.

Table 2.2 represents the volume of the total exports and imports of Azerbaijan for the 1991-2008 period.

Table 2.2: Dynamics of Imports and Exports in 1991-2008 (Million US dollars)

Years	Total Trade	Imports	Exports	Balance
1991	4002.2	1881.2	2121.0	239.8
1992	2423.8	939.8	1484.0	544.2
1993	1353.5	628.8	724.7	95.9
1994	1430.6	777.9	652.7	-125.2
1995	1304.9	667.7	637.2	-30.5
1996	1591.9	960.6	631.3	-329.3
1997	1575.7	794.4	781.3	-13.1
1998	1682.6	1076.5	606.1	-470.4
1999	1965.9	1035.9	929.7	-106.2
2000	2917.3	1172.1	1745.2	573.1
2001	3745.3	1431.1	2314.2	883.1
2002	3832.9	1665.5	2167.4	501.9
2003	5216.6	2626.2	2590.4	-35.8
2004	7131.4	3515.9	3615.4	99.65
2005	8558.4	4211.2	4347.2	136.0
2006	11638.9	5266.7	6372.2	1105.3
2007	11771.7	5713.5	6058.2	344.7
2008	54922.8	7166.6	47756.2	40589.6

Source: The State Statistical Committee of the Republic of Azerbaijan.

The 1991-2008 period can be divided into five sub-periods, for a complete understanding (Hüseynov, 2004):

1. 1991-1993. Collapse of the Soviet Union and achieving the country's independence. Basic pillars of the economy were destroyed; and the country was dragged into an economic crisis situation. Without doubt, this situation negatively impacted the newly emerging foreign trade relations, halted cooperation with traditional counterparts, and resulted in severe disruption of total trade. Compared to 1991, the total trade of Azerbaijan decreased by 39.4 percent in 1992 and by 66.2 percent in 1993. The volume of imports decreased by 66.6, and exports decreased by 65.9 percent in this period.

2. 1993-1995. Ceasefire during the war with Armenia, and start of reforms aimed at transition to market economy. Episodic positive trends were observed in total trade during these years. In other words, the intensity of the decline was halted to a considerable extent. During this period exports declined so the period ended with a deficit in foreign trade balance.

3. 1995-1998. Further reforms based on "Washington" and "Post Washington Consensus;" establishment of macroeconomic and macro financial stability (1997); and liberalization of foreign trade. One of the main events of this period is signing of the "Contract of the Century" regarding the production of oil in the Caspian Sea in 1995. Total trade of Azerbaijan followed an upward trend, but the increase was slow. Hence, the total volume of trade increased by 22.0 percent in 1996, 20.7 percent in 1997, and 28.9 percent in 1998. In 1998 the largest deficit (470.4 million dollars) in foreign trade balance, was observed. The main reason of this deficit was the rapid growth of imports of manufactured goods.

4. 1998-2001. Facilitated and broadened social-economic development. Foreign trade started to grow on a rapid pace and covered a vast geography. Consequently, foreign trade in 2000 increased by 73.3 percent compared to 1998 and 2.2 times in 2001. The positive balance in foreign trade was 573.1 million dollars in 2000, mainly due to expansion of the exports of oil and oil products.

5. The last period, starting as of 2002 is characterized with sustainable social-economic development and conclusion of the transition to a market economy. During this period, the country also achieved its commendable place in international division of labor. It should be noted that foreign trade followed a steady growth rate after 2002. Opening of "Baku-Tbilisi-Jeyhan" oil pipeline in 2006 contributed to the rapid economic growth in this period.

In Table 2.3 the commodity structure of Azerbaijan's imports and exports are presented. It can be followed from the table that the highest share in imports is machinery and mechanical appliances (30.8 percent). It is followed by vehicles, aircraft, vessels and associated transport equipment (17.0 percent), animals and animal products (11.4 percent), chemical products (8.3 percent), and mineral products (4.7 percent) in 2008. The largest growth in import share during the period from 2004 to 2008 was seen in beverages and tobacco products (752.1 percent), followed by vehicles, aircraft, vessels and associated transport equipment (502.6 percent).

Table 2.3: Commodity Structure of Imports and Exports (Million US dollars)

Product groups	Imports			2008 compared to 2004 (%)	Exports			2008 compared to 2004 (%)
	2004	2006	2008		2004	2006	2008	
1. Lives animals, animal products	38.2 (9.9)	41.2 (7.6)	51.5 (11.4)	134.8%	1.3 (2.7)	0.6 (3.6)	1.2 (0.8)	92.3%
2. Beverages and tobacco products	28.4 (0.9)	105.7 (2.1)	213.6 (3.2)	752.1%	9.1 (0.5)	20.8 (0.6)	18.4 (0.0)	202.2%
3. Mineral products	507.1 (14.4)	779.8 (14.8)	336.8 (4.7)	66.4%	2973.7 (82.2)	5392.7 (84.6)	46369.8 (97.1)	1559.3%
4. Vegetables products	231.9 (0.2)	201.7 (0.2)	519.5 (0.1)	224%	72.1 (0.3)	156.3 (0.5)	252.1 (0.1)	349.6%
5. Chemical products	132.9 (4.9)	249.2 (5.8)	437.6 (8.3)	329.3%	76.9 (2.5)	193.0 (2.1)	93.0 (0.4)	120.8%
6. Machinery and mechanical appliances	1084.5 (30.8)	1084.6 (29.4)	2207.8 (30.8)	203.6%	20.4 (0.6)	37.1 (0.6)	46.2 (0.1)	226.5%
7. Vehicles, aircraft, vessels and associated transport equipment	242.0 (6.9)	877.8 (16.7)	1216.3 (17.0)	502.6%	143.9 (4.0)	84.8 (1.3)	130.5 (0.3)	90.6%

Note: Numbers in parenthesis are the share of product groups in total imports/exports.
Source: The State Statistical Committee of the Republic of Azerbaijan, Yearbook: 2005-2009.

Hence, the analysis of the dynamics for the period over 2004-2008 years reveals at least two trends in total imports:

1) Growth in the share of production oriented goods in imports due to increased foreign direct investment flows through oil contracts;

2) The share of food products and chemical products in total imports increased;

Noticeable changes were also observed in the exports structure during the period in question. Consequently, according to the final data for 2008, mineral products constituted 97.1 percent of total exports. Further, in comparison with 2004, the share of mineral products in total exports increased by 15.5 times. In general, no other product has a significant share in exports from Azerbaijan.

A closer look at the commodity structure of exports would indicate that Azerbaijan's exports during the researched period were raw material-resource oriented. Similar trends can also be observed with other CIS countries' export situations. One of the main causes of this is related with lack of desired development in the local manufactured industry and its inability to cope with the competition in global commodity markets. On the other hand, rich natural resources and raw material reserves of these countries is another factor contributing to the above mentioned situation. Practices from other countries indicate that raw material-resource oriented foreign strategy eventually leads to a biased development of the country and evolution of mono structural economy. It also increases the country's dependency on the price conjecture of those materials in world markets, which subsequently increases foreign economic risks, and significantly affects profitability and efficiency of foreign trade.

Table 2.4 shows mono structuralism trend in foreign trade of Azerbaijan.

Table 2.4: Developmental Dynamics of Mono Structuralism Trend in Imports and Exports

Product groups	2004		2006		2008		2008 changes compared to 2004	
	Import	Export	Import	Export	Import	Export	Import	Export
Total	100	100	100	100	100	100	-	-
Food and live animals	9.9	2.7	7.6	3.6	11.4	0.8	1.5	-1.9
Beverages and tobacco	0.9	0.5	2.1	0.6	3.2	0.0	2.3	-0.5
Crude materials, inedible, except fuels	2.9	2.6	2.9	3.2	2.9	0.2	0	-2.4
Mineral products	11.4	82.2	11.6	84.6	1.6	97.1	-9.8	14.9
Animal and vegetable oils, fats and waxes	0.9	1.1	0.7	0.8	0.9	0.2	0	-0.9
Chemicals and related products, not elsewhere specified	4.9	2.5	5.8	2.1	8.3	0.4	3.9	-2.1
Manufactured goods classified chiefly by material	22.5	3.1	17.2	2.8	16.9	0.9	-5.6	-2.2
Machinery and transport equipment	37.8	4.5	46.2	1.9	47.5	0.4	9.7	-4.1
Miscellaneous manufactured articles	8.8	0.8	5.8	0.4	7.2	0.0	-1.6	-8.8

Source: The State Statistical Committee of the Republic of Azerbaijan, Yearbook: 2005-2009.

The share of oil products in total exports in the 1996-2008 period and the volume of oil exports are presented in Figure 2.1 and Figure 2.2, respectively.

Figure 2.1: Share of Oil Products in total exports (1996-2008)

Share of oil products in total exports in 1996-2008
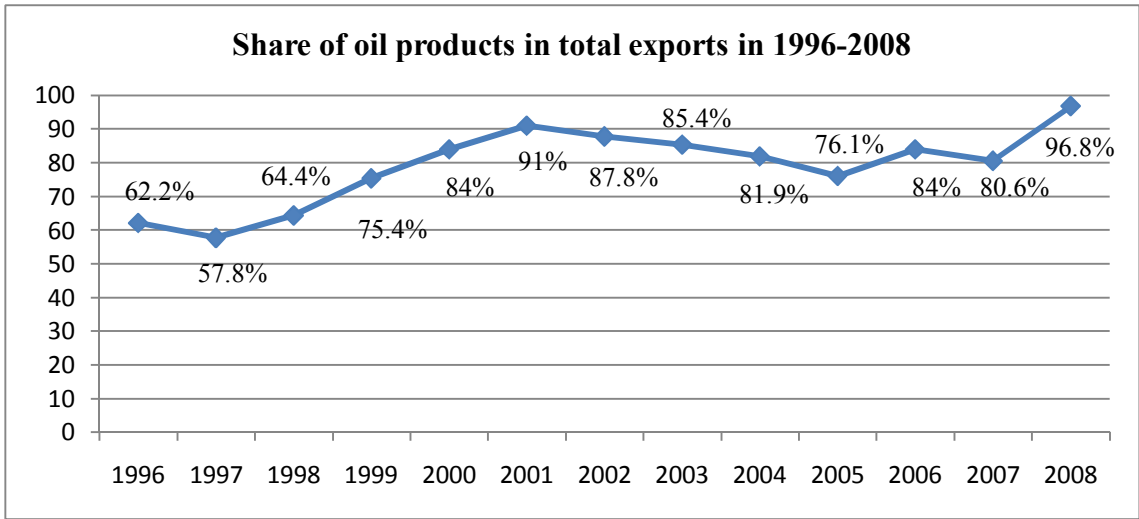
Source: The State Statistical Committee of the Republic of Azerbaijan.

Figure 2.2: Exports of Oil Products in 1996-2008 (Million US dollar)

Exports of oil products in 1996-2008 (Million US dollars)
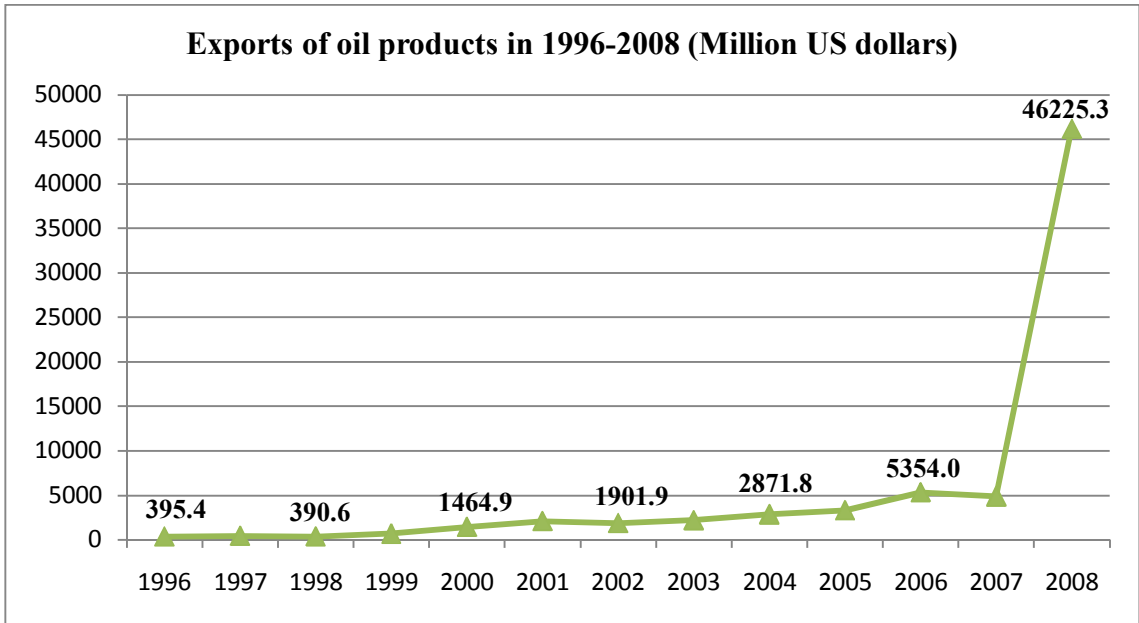
Source: The State Statistical Committee of the Republic of Azerbaijan.

It can be seen from Figure 2.1 that the share of oil products in total exports was 62.2 percent in 1996. However in 2000, this figure was already 84 percent. In 2001, the share of oil and oil products in Azerbaijan's total exports increased and reached a record level of 91 percent. Only in 2002, the share of these products in total exports decreased

by 3.2 percent and was 87.8 percent. As we can see from Figure 2.1 and Figure 2.2, despite the fact that the physical amount of oil and oil products increased during 2003-2007, the share of oil products relatively decreased to 80.6 percent in 2007. This development could be appraised as a positive tendency in Azerbaijan's commodity structure of exports. But in 2008 due to increase in oil production the share of oil in total exports increased to 96.8 percent.

The fact that Azerbaijan's exports mainly consist of fuel-energy products and that this tendency is growing, it could lead to a severe crisis or even a paralysis situation of the national economy if the global market conjecture experiences dramatic changes.

In terms of imports, it should be noted that the commodity structure of import operations is not at a desired level. During the 1991-2008 period, consumption goods, such as food products, tobacco, alcoholic beverages, light industry goods and other such products occupy a significant share in total imports. Despite the existence of an adequate capacity and advantages for production of such goods within the country, the large share of these products in total imports restricts the development of domestic production sector that could substitute imports.

Also it should be noted that oil contracts, especially project activities within the framework of the "Contract of the Century" positively impact the dynamics of imports during the past years. Implementation of oil contracts led to a significant increase in total imports.

Consequently, the mono structuralism trend is strengthening in import-export operations in the country. The main role in mono structuralism in exports is of course related with oil and oil products. Considering that the export value of this product group in its entirety depends on conjecture changes in the world market, the situation that has evolved is not safe and sound.

Azerbaijan might have a danger of facing Dutch Syndrome[1] if non-oil sectors and manufactured industries are not developed. Internal manufacturing will face more serious rivalry upon becoming a member of World Trade Organization. This is the reason why all above mentioned factors must be seriously taken into consideration.

2.2.2. Geographical Distribution of Azerbaijan's Trade

After Azerbaijan gained its independence, the country still was depending on the economic region that it experienced earlier. Foreign trade relations of Azerbaijan were carried out about 80-85 percent with CIS countries in 1991-1993. While share of CIS countries in general exports was 94 percent in 1991, it declined in the following years as follows: 22.7 percent in 1999, 13.5 percent in 2000, 11 percent in 2002, 14.6 percent in 2006, and 3.4 percent in 2008. Share of CIS countries in imports was 80 percent in 1991 and changed like: 31.4 percent in 1999, 32 percent in 2000, 32.9 percent in 2002 and 39.8 percent in 2006, and finally 32.7 percent in 2008.

As a result of liberalization of foreign trade links, Azerbaijan established bilateral trade relations with a number of western countries (the USA, Italy, France, England, Germany etc.). Size of trade relations with CIS countries decreased since the expansion of trade relations with other countries.

The geographical span of the foreign trade was significantly broadened during the last six years. As we can see in the Table 2.5, European countries play a very important role in Azerbaijan's foreign trade relations in the last years. For 2008, 28.4 percent of imports and 56.5 percent of exports were from the EU countries.

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[1] The Dutch syndrome is a concept that explains the relationship between the increase in exploitation of natural resources and a decline in the manufacturing sector; and comes from the theory that an increase in revenues from natural resources will deindustrialize a nation's economy by raising the exchange rate, which makes the manufacturing sector less competitive and public services entangled with business interests.

Table 2.5: Geography of Foreign Trade Relations and Dynamics of these Relations by Country Groups (Million US Dollars)

Country groups	Imports			Exports		
	2004	2006	2008	2004	2006	2008
CIS	1200.6 (34.1)	2098.2 (39.8)	2340.4 (32.7)	614.2 (17.0)	929.7 (14.6)	1619.2 (3.4)
EU	1204.4 (34.3)	1624.3 (30.8)	2034.0 (28.4)	1972.6 (54.6)	3643.3 (57.2)	26979.1 (56.5)
BSEC	1000.5 (28.5)	1998.1 (37.9)	2846.1 (39.7)	747.0 (20.7)	1325.5 (20.8)	2526.9 (5.3)
ECO	704.1 (20.0)	996.9 (18.9)	1186.5 (16.6)	540.9 (15.0)	977.1 (15.3)	1430.9 (3.0)
GUAM	187.9 (5.3)	371.4 (7.1)	624.9 (8.7)	201.2 (5.6)	324.0 (5.1)	663.2 (1.4)
OPEC	79.1 (2.3)	127.5 (2.4)	172.3 (2.4)	294.5 (8.1)	320.2 (8.1)	1948.2 (4.1)
OIC	890.1 (25.3)	1087.6 (20.6)	1343.4 (18.7)	700.9 (19.4)	1034.9 (16.2)	3106.9 (6.5)
ESCAP	1173.2 (33.4)	1900.5 (36.1)	2639.2 (36.8)	422.3 (11.7)	631.4 (9.9)	1140.8 (23.9)
EFTA	100.1 (2.8)	67.6 (1.4)	94.5 (1.3)	3.7 (0.1)	5.5 (0.1)	110.2 (0.2)
ASEAN	139.8 (4.0)	20.6 (0.4)	102.5 (1.4)	132.5 (3.7)	69.0 (1.1)	1536.9 (3.2)
OECD	1825.7 (51.9)	2484.5 (47.2)	3543.8 (49.4)	2004.9 (55.5)	4046.9 (63.5)	34557.4 (72.4)

Note: Numbers in parenthesis are the share of country groups in total imports and exports.
Source: The State Statistical Committee of the Republic of Azerbaijan, Foreign Trade Yearbook: 2005-2009.

Table 2.6 shows main import partners of Azerbaijan during 2004-2008. It is seen the table that the main import partners of Azerbaijan were Russia and Turkey in 2008. In the 2004-2008 period, volume of imports from CIS countries increased by 94.9 percent (2340.4 million dollars).

As seen in Table 2.7, the share of exports to Italy in total exports is 40.2 percent in 2008 and this reveals the existence of "a one country-one product syndrome". During the studied period, volume of exports from CIS countries increased by 163.3 percent

(1619.2 million dollars). At the same time, Azerbaijan is about to lose CIS countries as a sales market. For instance, Russia declined to 13th place from 3rd, Kazakhstan to 21th place from 10th, and Ukraine to 26th place to 16th.

Table 2.6: The Main Import Partners of Azerbaijan

Countries	Imports (Million US dollars)				Share in total imports (%)				Rank
	2004	2006	2007	2008	2004	2006	2007	2008	2008
Russia	569.5	1181.6	1004.2	1350.1	16.2	22.4	17.6	18.8	1
Turkey	225.0	385.0	624.65	807.0	6.4	7.3	10.9	11.3	2
Germany	198.5	403.8	472.1	598.6	5.6	7.7	8.3	8.4	3
Ukraine	170.4	317.5	465.6	567.2	4.8	6.0	8.2	7.9	4
China	145.5	222.5	278.8	478.6	4.1	4.2	4.9	6.7	5
UK	421.8	453.8	411.2	386.0	12.0	8.6	7.2	5.4	6
USA	131.9	197.9	269.0	267.2	3.8	3.8	4.7	3.7	7
Finland	6.9	167.7	151.5	245.9	0.2	3.2	2.7	3.4	8
Japan	127.1	188.3	295.1	241.5	3.6	3.6	5.2	3.4	9
Kazakhstan	236.7	127.3	222.3	200.0	6.7	2.4	3.9	2.8	10
Italy	106.7	124.6	140.9	188.5	3.0	2.4	2.5	2.6	11
S. Korea	24.1	46.9	91.6	162.6	0.7	0.9	1.6	2.3	12
France	120.1	55.8	103.8	132.8	3.4	1.1	1.8	1.9	13
India	47.0	57.4	72.0	110.4	1.3	1.1	1.3	1.5	14
Iran	45.3	85.9	105.2	97.2	1.3	1.6	1.8	1.4	15

Source: The State Statistical Committee of the Republic of Azerbaijan, Foreign Trade Yearbook: 2005-2009.

Table 2.7: The Main Export Partners of Azerbaijan

Countries	Exports (mln. US dollars)				Share in total exports (%)				Rank
	2004	2006	2007	2008	2004	2006	2007	2008	2008
Italy	1614.9	2845.4	940.9	19220.1	44.7	44.7	15.5	40.2	1
USA	26.0	91.9	228.2	6014.3	0.7	1.4	3.8	12.6	2
Israel	323.7	684.8	369.8	3605.8	9.0	10.7	6.1	7.6	3
India	5.3	1.0	144.9	2432.5	0.1	0.0	2.4	5.1	4
France	66.9	347.5	258.8	2322.7	1.9	5.5	4.3	4.9	5
Spain	5.6	52.8	52.8	1497.7	0.2	0.8	0.9	3.1	6
Indonesia	129.4	0.1	390.2	1411.1	3.6	0.0	6.4	3.0	7
Netherlands	14.3	14.6	7.3	1353.4	0.4	0.2	0.1	2.8	8
Chile	-	-	114.6	933.9	-	-	1.9	2.0	9
UK	6.6	5.6	3.1	925.9	0.2	0.1	0.1	1.9	10
S. Korea	3.8	68.6	124.8	696.8	0.1	1.1	2.1	1.5	11
Turkey	182.6	388.1	1056.3	626.2	5.1	6.1	17.4	1.3	12
Russia	209.8	344.3	527.1	582.9	5.8	5.4	8.7	1.2	13
Canada	0.2	0.7	2.2	566.5	0.0	0.0	0.0	1.2	14
Croatia	109.2	3.6	39.9	542.7	3.0	0.1	0.7	1.1	15

Source: The State Statistical Committee of the Republic of Azerbaijan, Foreign Trade Yearbook: 2005-2009.

Signing of the agreement for construction of the Baku-Tbilisi-Jeyhan pipeline affected the foreign direct investment inflows from participating countries as well as this project affected trade with these countries. Table 2.8 shows foreign direct investments to the oil sector from some of these countries:

Table 2.8: Foreign Direct Investments to the Oil Sector (1999-2008) (million US $)

Countries	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Turkey	67.8	31.6	11.8	55.6	30.4	80.1	96.2	136.6	109.2	145.2
UK	45.8	6.8	15.1	108.1	97.5	4.2	39.5	39.1	80.0	89.9
USA	29.8	11.2	16.9	41.4	42.8	8.4	24.8	70.0	78.0	87.9
Germany	6.2	1.7	1.2	1.7	0.5	2.1	21.5	17.4	22.9	48.2
Russia	-	-	1.4	0.7	1.6	1.8	5.1	4.6	10.7	5.8
Italy	-	-	-	-	14.7	3.7	4.6	2.8	14.0	2.0
France	25.4	39.3	7.6	25.7	14.7	2.2	2.6	11.1	4.4	-

Source: The State Statistical Committee of the Republic of Azerbaijan, Yearbook: 1999-2009.

Also dynamics of the foreign direct investments to the oil sector is presented in Figure 2.3. The upward trend in investment inflows can be seen from the figure.

Figure 2.3: Dynamics of the Foreign Direct Investments to the Oil Sector (million US dollars)
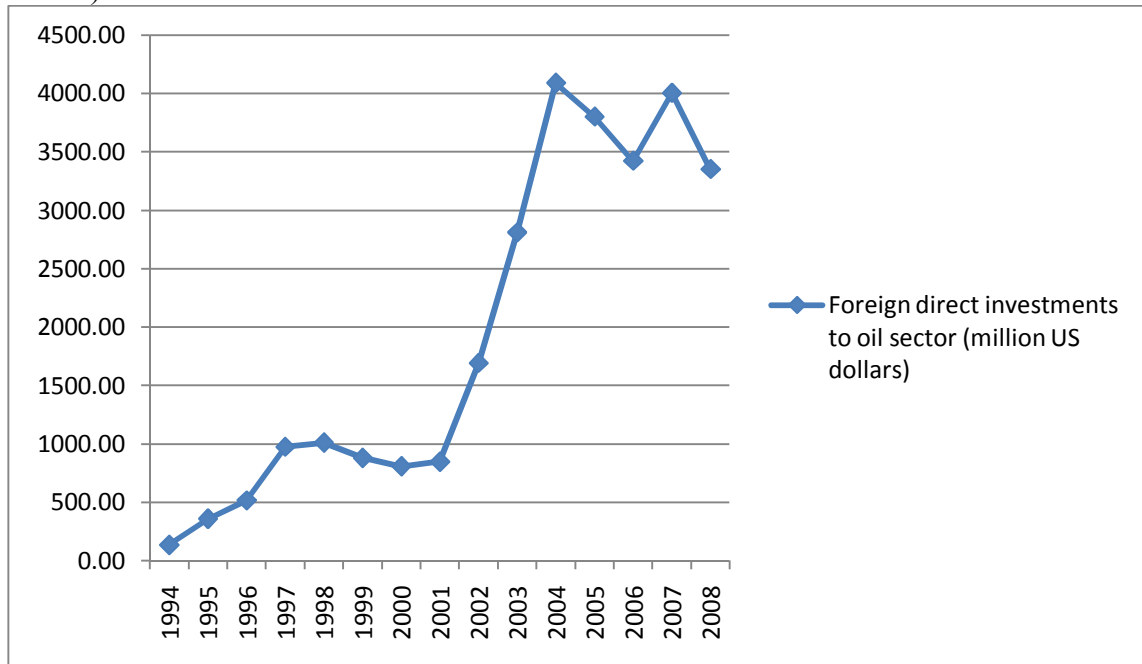
Source: The State Statistical Committee of the Republic of Azerbaijan, Yearbook: 2000-2009.

CHAPTER 3

EMPIRICAL ANALYSIS OF THE EFFECTS OF
EXPORTS AND IMPORTS
ON ECONOMIC GROWTH IN AZERBAIJAN

The aim of this chapter is to analyze the impact of exports and imports on real GDP of Azerbaijan, using quarterly data over the period 1996-2008. Consequently, we will test how changes in exports and imports affect economic growth. Therefore, cointegration and causality relationships between these variables and long-run and short-run dynamics will be investigated.

3.1 ECONOMETRIC METHODOLOGY

Many macroeconomic time series that are used in econometric analyses include trend. If these variables are included into the regressions without any transformations, they may give spurious regression results. The variables should be stationary. That's why firstly; information will be given about one of the main concepts of time series, stationarity and about the unit root test implemented in this study. Then cointegration, error correction model and causality concepts will be enlightened.

3.1.1. Stationarity in Time Series (Unit Root Tests)

The main element of econometric studies with time series is to test whether series are stationary or not. Stationary process is a type of stochastic process that has got a great deal of attention and close examination by time series analysts. Generally, a stochastic process is said to be stationary if its mean and variance are constant over time and the value of covariance between the two time periods depends only on the distance or gap or lag between the two time periods and not the actual time at which the covariance is computed (Gujarati, 2003:797).

Despite of the fact that our interest is stationary time series, we often face with nonstationary time series. In econometric practice, using of nonstationary time series can cause serious problems. A number of empirical works have been shown that, in general the statistical properties of regression analysis using nonstationary time series are doubtful. Models, generated by time series including stochastic or deterministic trend, can give spurious regression results (Utkulu, 1993).

It is important to test stationarity of each variable and to identify the order of integration of each variable, before any sensible regression analysis can be performed. For testing stationarity of variables Augmented Dickey-Fuller (ADF), Phillips-Perron (PP) and Kwiatkowski, Phillips, Schmidt and Shin (KPSS) tests have been implied in this study.

A simple method of testing the order of integration of time series is The Dickey-Fuller (DF) test proposed by Dickey and Fuller (1979). The DF test can be tested in three different forms, that is, under three different null hypotheses (Gujarati, 2003:815):

$$\Delta Y_t = \delta \Delta Y_{t-1} + u_t \qquad (3.1)$$

$$\Delta Y_t = \beta_1 + \delta \Delta Y_{t-1} + u_t \qquad (3.2)$$

$$\Delta Y_t = \beta_1 + \beta_2 t + \delta \Delta Y_{t-1} + u_t \qquad (3.3)$$

The series Y_t is a random walk without drift in equation (3.1); Y_t is a random walk with drift in equation (3.2); Y_t is a random walk with drift around a stochastic trend in equation (3.3). In last equation, t is the trend variable. If $\delta=0$, in all equations, then time series include unit root (Kutlar, 2000:159). The alternative hypothesis is $\delta<0$, which means stationarity of Y_t series. Also it is important to add that critical values of the τ test for testing the null hypothesis are different for each of above three equations of the Dickey-Fuller test.

Although the DF test is an important step in estimating of integrated order, it does not take into account autocorrelation of error terms. If error term, u_t, is correlated the DF test will be invalid. As a solution Dickey and Fuller (1981) added lagged value of dependent variable to the model to approximate the autocorrelation. In the literature,

this test known as Augmented Dickey-Fuller test and denoted formally as ADF. The ADF test is the most efficient test for estimating integration order and is the most widely used unit root test in practice.

The ADF test of equation (3.3) will be:

$$\Delta Y_t = \beta_1 + \beta_2 t + \delta Y_{t-1} + \alpha_i \sum_{i=1}^{m} \Delta Y_{t-i} + \varepsilon_t \qquad (3.4)$$

where ε_t is a white noise error term, $\Delta Y_{t-1} = (Y_{t-1} - Y_{t-2})$, $\Delta Y_{t-2} = (Y_{t-2} - Y_{t-3})$, etc., m is the lag number. In ADF test also we test if $\delta=0$. If hull hypothesis is rejected against alternative hypothesis, $\delta<0$, it shows stationarity of ΔY_t series and $Y_t \sim I(1)$. It is important to determine the lag number (m) and lag number must be comparatively small for having enough degrees of freedom; at the same time must be wide enough for not causing autocorrelation in error term. To this end, Durbin Watson test, Lagrange Multiplier test for serial correlation or any of the model selection procedures such as Akaike Criterion can be used for choosing the optimal value for m (Utkulu, 1993).

Phillips and Perron (1988) developed more extensive tests of unit root that have become popular in the analysis of time series. The tests are similar to ADF tests and generally give similar results. But the Phillips-Perron (PP) test differs from the ADF test mainly in the way it deals with serial correlation and heteroskedasticity in the errors.

The test regression for the PP test is

$$\Delta Y_t = \beta D_t + \delta Y_{t-1} + \varepsilon_t \qquad (3.5)$$

where ε_t is I(0) and can be heteroskedastic, D_t is a vector of deterministic terms (constant, trend etc.). The PP test corrects any serial correlation and heteroskedasticity in the error terms, ε_t, of the test regression.

The main advantage of the PP test over the ADF test is that the PP tests are robust to general forms of heteroskedasticity in the error term ε_t. Another advantage is that the user does not have to specify a lag length for the test regression (Phillips and Perron, 1988).

Another widely applied unit test was presented by Kwiatkowski, Phillips, Schmidt and Shin (1992) and defined as KPSS test. In KPSS test, it is aimed to transform series to stationary purifying the time series from deterministic trend. In this case, as time series are detrended, they are stationary. In KPSS, in contrast to the previous tests, the null hypothesis shows stationarity of time series; and alternative hypothesis shows nonstationarity.

According to Telatar et al. (2002) KPSS test is important step in testing unit root for linear and nonlinear time series. As KPSS test is defined as the same form like Lagrange multiplier (LM), generation of LM statistics is important (Sevüktekin and Nargeleçekenler, 2005:306):

$$Y_t = \beta t + w_t + \varepsilon_t \qquad (3.6)$$
$$w_t = w_{t-1} + u_t \qquad (3.7)$$

where w_t is stochastic trend; t is deterministic trend and u_t is error term. In KPSS test null hypothesis assumes that variance of the error term is zero ($\sigma^2_u = 0$). If the variance of the error term equals zero, this means Y_t is stationary. Alternative hypothesis assumes that variance of the error term is greater than zero ($\sigma^2_u > 0$).

The first step of estimating KPSS test statistics is to calculate the sum of error terms remaining from the dependent variable regression (3.6) (Sevüktekin and Nargeleçekenler, 2005:306):

$$S_t = \sum_{t=1}^{T} \varepsilon_t \qquad t = 1, 2, 3,\ldots, T \qquad (3.8)$$

So LM statistics takes following form:

$$LM = \sum_{t=1}^{T} \frac{S_t^2}{s^2(l)} \qquad (3.9)$$

$s^2(l)$ is estimated value of variance by error terms. LM value obtained from this equation is compared with critical values developed by Kwiatkowski et al. (1992). If estimated LM value is smaller than critical table value then hull hypothesis cannot be rejected; in this case series is stationary.

3.1.2. Cointegration

As mentioned before, using nonstationary time series in econometric analyses may cause serious problems. The time series, which include stochastic or deterministic trend, can give spurious regression results. Hence test statistics can be invalid. Most of the macroeconomic time series include trend. Some researchers suggest to difference time series until transforming them to stationary series. It was proved that this method can cause losing some of long-run information which is of interest to economists (Utkulu, 1997:39).

This problem of econometric studies can be solved by the cointegration concept presented by Engle and Granger (1987). With the help of cointegration analysis, nonstationary variables can be included to the regression without causing spurious results. Also this analysis provides efficiency in testing, estimating and modelling of long-run relationships among time series variables.

3.1.2.1. Engle-Granger Two-Step Modelling Method

A method of estimating a long-run equation was presented by Engle and Granger (1987) and this method has been widely applied by researchers. One of the main advantages of this method is that the long-run equilibrium relationship can be modelled by directly involving the levels of the variables. In the first step all dynamics are ignored and the long-run equation is estimated:

$$Y_t = \beta X_t + u_t \qquad (3.10)$$

In order for Y_t and X_t to be cointegrated, the estimated residuals from equation (3.10) must be stationary. In this case the cointegration regression is said to be sufficient. As the variables are nonstationary, we can face the spurious regression problem. Therefore, R^2 and DW must be carefully inspected. If all indicators are satisfactory, we can proceed to the next step.

The second step includes estimating of a short-run model. In the short-run there may be disequilibrium. Hence, we can treat the error term as the "equilibrium error" (Gujarati, 2003:824). And we can use this error term to tie the short-run behavior of GDP to its long-run value. The error correction mechanism (ECM) first used by Sargan (1984) and later popularized by Engle and Granger corrects for disequilibrium. An important theorem, known as Granger Representation Theorem, states that if two variables Y and X are cointegrated, then the relationship between the two can be expressed as Error Correction Mechanism (ECM) (Engle and Granger, 1987:255). Simply, we can write ECM for equation (3.10) as follows:

$$\Delta Y_t = \alpha_0 + \alpha_1 \Delta X_t + \alpha_2 u_{t-1} + \varepsilon_t \qquad (3.11)$$

where Δ denotes the first difference, ε_t is an error term, u_{t-1} is the lagged value of the error term from cointegration regression (3.10).

According to the Granger Representation Theorem α_2 is expected to be negative and statistically significant. The absolute value of α_2 shows how quickly the equilibrium is restored. Also α_2 should take a value between -1 and 0, otherwise the process is explosive (Ghatak, Milner and Utkulu, 1997).

3.1.2.2. Error Correction Model (Hendry's General-to-Specific Approach)

Above the simple form of ECM is showed, but for obtaining the best error correction model for our analysis, in this study Hendry's (1995) general-to-specific approach will be used.

General-to-specific approach method is largely based on Sargan's (1964) study. In the following years, this study was developed by Davidson et al. (1978), Davidson and Hendry (1981) and Hendry and von Ungern-Sternberg (1981). Later this approach was presented definitely by Gilbert (1986), Pagan (1987) and Hendry (1989).

General-to-specific modeling is formulation of a fairly unrestricted dynamic model, in this manner called general, which is afterwards transformed, tested and reduced in size by performing a number of tests for restrictions. The general model is usually depicted as autoregressive distributed lag form (ADL). The ADL form means that a dependent variable, Y_t, is described as a function of its own lagged values, and the current and lagged values of independent variables (Charemza and Deadman, 1999). In the literature L^r (lag operator) is used for notation of ADL model. L^r is defined for variable X_t as:

$$L^r X_t = X_{t-r} \qquad (3.12)$$

Let's consider a simple first order autoregressive model:

$$Y_t = \alpha Y_{t-1} + \varepsilon_t \qquad (3.13)$$

We can rewrite this using lag operator as:

$$(1 - \alpha L)Y_t = \varepsilon_t \qquad (3.14)$$

Also consider a finite distributed lag model:

$$Y_t = \beta_0 X_t + \beta_1 X_{t-1} + \beta_2 X_{t-2} + ... + \beta_n X_{t-n} + \varepsilon_t \qquad (3.15)$$

Using lag operator, equation (3.15) becomes:

$$Y_t = b(L)X_t + \varepsilon_t \qquad (3.16)$$

If we add lagged values of dependent variable (Y_t) to distributed lag model (3.15), the result will be ADL model, and is denoted as:

$$Y_t = \alpha_0 Y_{t-1} + \alpha_2 Y_{t-2} + ... + \alpha_k Y_{t-k} + \beta_0 X_t + \beta_1 X_{t-1} + \beta_2 X_{t-2} + ... + \beta_n X_{t-n} + \varepsilon_t \qquad (3.17)$$

In more succinct notation, using polynomial lag operator, it can be denoted as:

$$a(L)Y_t = b(L)X_t + \varepsilon_t \qquad (3.18)$$

In our investigation, for estimating short-run dynamics we will apply simple form of (3.17):

$$\Delta Y_t = \beta_0 + \sum_{i=1}^{n} \beta_{1i} \Delta Y_{t-i} + \sum_{i=0}^{n} \beta_{2i} \Delta X_{t-i} + \beta_3 EC_{t-1} + \varepsilon_t \quad (3.19)$$

Generally, Hendry's general-to-specific model consists of four steps (DPT, 1995):

1. General model is established. This model must include variables of the theoretical model and bound the dynamic of process in possible minimum.
2. After reparameterisation of the model, more orthogonal and more explainable parameters, from the long-run equilibrium's point of view, are obtained.
3. By simplifying the model, a short-run model with consistent data set is obtained.
4. Coefficients, error terms and power of the estimation are tested.

In economic theories, generally, no information about the adaptation process from short-run to the long-run are presented. Consequently, short-run dynamics of the models are determined according to variables of the time series.

3.1.3. Causality

In econometrics, the notion of causality changes its philosophical matter and is more explicit. In empirical econometrics, researchers want to know whether an increase in one economic series results increases in another economic series or decreases; to identify the direction of relationship among series.

The most widely econometrical definition of causality has been introduced by Granger (1969). In literature it is called as Granger definition of causality and can be formulated simply as follows:

If present value of Y can be predicted by using past values of X, then X is a Granger cause of Y; and causality from X to Y is denoted as $X \rightarrow Y$.

The basic aims of investigation of causality relationship between X and Y can be arranged as (Işiğiçok, 1994:90):

- Prediction of future periods by using current values of X and Y;
- Whether Y can be predicted by its past values or by past values of X;
- Identifying exogenity and endogenity of variables;
- Finding direction of causality;
- To find out after how many periods the change in one variable affects another variable;
- To determine the structural changes in parameters.

In the literature, various tests are presented for testing causality. The most widely used ones are Granger (1969) and Sims (1972) tests of causality.

The Granger causality test was originally suggested by Granger (1969) and modification was suggested by Sargent (1976). The Granger test assumes that information related to the prediction of the variables, Y and X, is included only in the time series data on these variables. The test involves estimation of following regressions:

$$Y_t = \sum_{i=1}^{n} \alpha_i X_{t-i} + \sum_{i=1}^{n} \beta_j Y_{t-j} + u_{1t} \qquad (3.20)$$

$$X_t = \sum_{i=1}^{n} \lambda_i X_{t-i} + \sum_{i=0}^{n} \delta_j Y_{t-j} + u_{2t} \qquad (3.21)$$

Regressions (3.20) presumes that current value of Y is related with the past values of X; and (3.21) postulates that current value of X is related with the past values of Y.

The first step of the Granger causality test is establishing of hypotheses:

H_0: $\sum \alpha_i = 0$:   X does not Granger cause Y

H_1: $\sum \alpha_i \neq 0$:   X Granger causes Y

For testing null hypothesis, we apply *F* test:

$$F = \frac{(RSS_R - RSS_{UR}/m)}{RSS_{UR}/(n-k)} \qquad (3.22)$$

where RSS_R is restricted residual sum of squares, obtained running regression with including all lagged Y, but without including X; RSS_{UR} is unrestricted residual sum of squares, obtained by running regression including lagged X; *m* is number of restrictions; *k* is number of parameters in the unrestricted regression; *n* is number of observations.

The final step is the comparison of the computed *F* value with the critical *F* value. If computed *F* value exceeds the critical *F* value at the significance level (%1, %5, %10) then we reject H_0. Rejection of the null hypothesis indicates causality relationship between variables.

Since the Granger causality tests are very sensitive to the lag length selection, Akaike information criterion (AIC) will be used in this study (Kasman and Emirhan, 2007). For choosing the lag length, we will start with one lag and increase them by AIC. The lag of the model with the least AIC value will be our model's lag length.

There are four possible cases that can appear when testing causality between X and Y:

I.   X → Y: Unidirectional causality from X to Y. It occurs when the estimated coefficients of the lagged X in (3.20) are statistically different from zero ($\sum \alpha_i \neq 0$); and coefficients of the lagged Y in (3.21) are not statistically different from zero *($\sum \delta_j = 0$)*.

II.   Y → X: Unidirectional causality from Y to X. The estimated coefficients of the lagged X in (3.20) are not statistically different from zero ($\sum \alpha_i = 0$); and coefficients of the lagged Y in (3.21) are statistically different from zero *($\sum \delta_j \neq 0$)*.

III.   X ↔ Y: Bilateral causality. The coefficients of X and Y are statistically different from zero.

IV.   Independence. The coefficients of X and Y are not statistically significant.

Before the development of the error correction model, the standard Granger test had been using for testing causality between two variables. According to Granger, if there is cointegration between two variables, then the advantages of standard Granger causality test are not valid (Oskooee and Alse, 1993). Therefore, if there is cointegration between variables, then error correction term, obtained from long-run equation, is included to standard Granger test. Otherwise, standard Granger test is implied without including error correction term (Giles D., Giles J. and McCann, 1993:201). So, causality relationship is tested using error correction model. The Granger error correction model can be formulated as follows:

$$\Delta Y_t = \alpha_1 + \sum_{i=1}^{n} \beta_{1i} \Delta Y_{t-i} + \sum_{j=1}^{n} \lambda_{1i} \Delta X_{t-j} + \delta_1 EC_{t-1} + \varepsilon_{1t} \qquad (3.23)$$

$$\Delta X_t = \alpha_2 + \sum_{i=1}^{n} \beta_{2i} \Delta X_{t-i} + \sum_{j=1}^{n} \lambda_{2i} \Delta Y_{t-j} + \delta_2 EC'_{t-1} + \varepsilon_{2t} \qquad (3.24)$$

In these equations EC_{t-1} and EC'_{t-1} are stationary error terms, obtained from equations (3.23) and (3.24) respectively; and are called error correction terms. Δ indicates the first difference.

In Granger error correction model, we test whether estimated coefficients of lagged values of all variables are significant or not by using F test (Bahmani-Oskooee, Mohtadi and Shabsigh, 1991).

Let's consider equation (3.24). For saying Y Granger causes X, not only all λ_{2i} must be statistically significant, but also δ_2 must be significant. For functioning of the mechanism also the coefficient of error correction term must be negative and the same time has to be between 0 and -1 (Ghatak, Milner and Utkulu, 1997:217).

3.2. DATA DESCRIPTION

Data used in this thesis are quarterly and include the time period from the first quarter of 1996 to the last quarter of 2008. As we know, for applying cointegration techniques a large data set is needed, and for such analyses number of observations must be more than 30 (Bahmani-Oskooee and Alse, 1993). That's why quarterly data are used in this study.

The data are not deseasonalized from seasonal effects and factors. Most of the quarterly data exhibit seasonal fluctuations. But using of seasonally adjusted series or using of seasonal unadjusted series is debated in the literature. Filtration procedure for deseasonalization of series from seasonal effects can cause losses in characteristics of series. Hence, generally using such operations is not suggested. Additionally, when working with seasonal adjusted series, especially estimated value of the unit root parameter in the DF regression, exhibits deviation bias to 1; therefore, the nonstationarity hypothesis is rarely rejected (Balcılar and Çabuk, 1999:327). Also, in models generated with seasonally adjusted series, the variance of the error term can be small artificially. And this can cause spurious regression results (Ericson, Hendry and Tran, 1994:193).

In this thesis three variables were used: real Gross Domestic Product (GDP), exports and imports. For aggregation purposes, the GDP series was converted to a common currency, US dollar.

The cointegration and causality relations between real GDP and exports and between real GDP and imports will be investigated. The empirical tests are done by using Eviews and Microfit package programs.

Time series data are used and economic growth (real GDP) is the dependent variable (*lgdp*), and exports (*lexp*) and imports (*limp*) are independent variables in the model. All variables are logarithmic. The sources and the characteristics of the data set can be observed from the Table 3.1 below.

Table 3.1: Variable Description

| Data	Definition	Frequency	Source
lgdp	Real GDP	quarterly	The Central Bank of the Republic of Azerbaijan
lexp	Exports	quarterly	The State Statistical Committee of the Republic of Azerbaijan
limp	Imports	quarterly	The State Statistical Committee of the Republic of Azerbaijan

3.3. EMPIRICAL FINDINGS

In this part of the thesis, parallel to the theoretical information given above, first stationarity of data will be analyzed, then cointegration and causality test results will be presented.
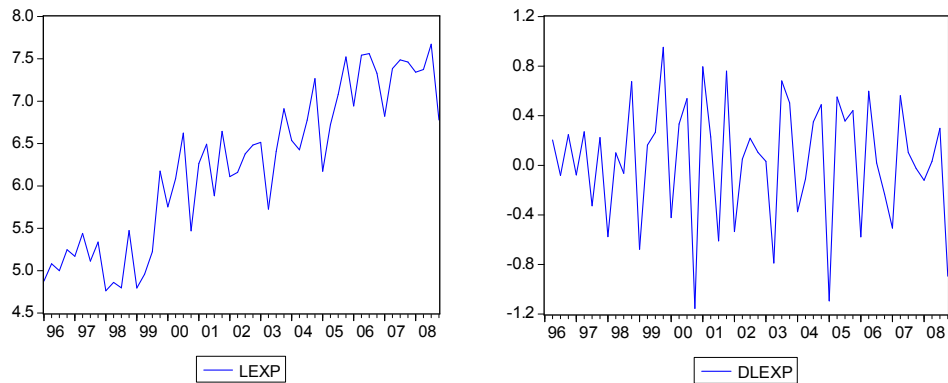
3.3.1. Unit Root Tests

As a preliminary stage to cointegration analysis, the stationarity of each variable was tested using graphical analysis and unit root tests. First of all, the graphs of the variables (lgdp, lexp, limp) are presented in Figure 3.1, Figure 3.2 and Figure 3.3:
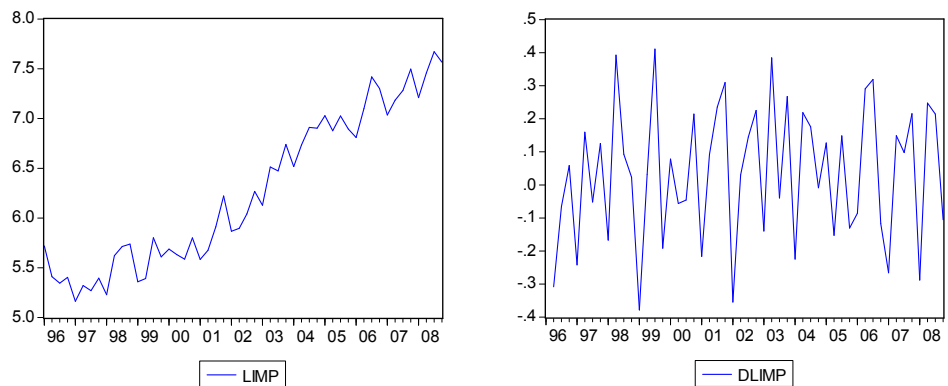
Figure 3.1: Variation of real GDP
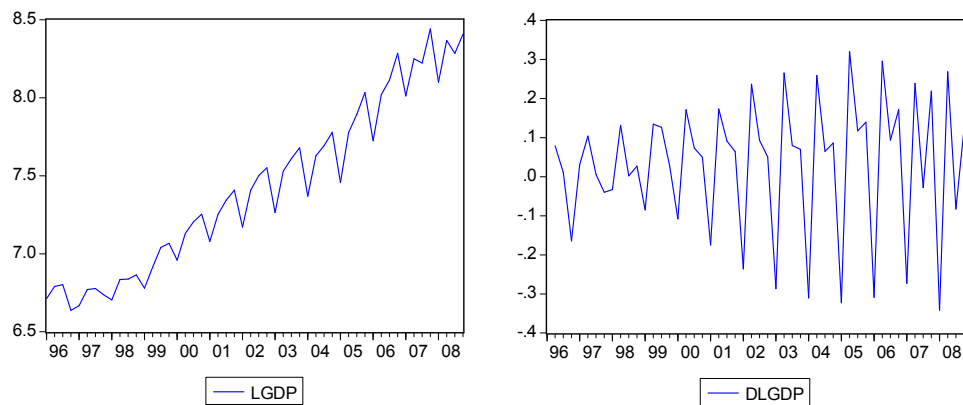
Figure 3.2: Variation of Exports

Figure 3.3: Variation of Imports

From the graphs, it is seen that over the period all variables have been increasing, that is, showing an upward trend, intimating perhaps that the mean of all variables have been altering. This implies that the series of the variables are not stationary. But the first differences of the variables look like purified from trend. So the first differences of all three variables are stationary. However these outcomes must be supported by the unit root tests. In Table 3.2, unit root tests results are presented:

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Table 3.2: Unit Root Tests

		lgdp	**lexp**	**limp**
ADF	Level	-1.133 (4)	-0.840 (3)	0.734 (3)
	1st diff	-2.307*** (3)	-6.857* (2)	-6.940* (2)
PP	Level	-0.033 (1)	-2.002 (1)	0.418 (3)
	1st diff	-21.641* (1)	-17.048* (1)	-9.920* (2)
KPPS	Level	0.950* (5)	0.913* (5)	0.936* (5)
	1st diff	0.121 (5)	0.101 (5)	0.305 (4)

Note: *, ** and *** denote rejection of null hypothesis at 1, 5 and 10%, respectively. The numbers in parenthesis are optimum number of lags determined according to AIC; critical values are based on MacKinnon (1991). For PP and KPSS tests, numbers in parenthesis are the truncation lag determined according to Bartlett Kernel.

According to the unit root tests, we cannot reject H_0, and all variables are nonstationary in their levels. After taking the first differences for all variables, we reject the null hypothesis. Test results show that time series are stationary from the first order (*I(1)*).

3.3.2. Cointegration

Drawing upon the empirical literature, our standard long-run relationship between real GDP and exports and between real GPD and imports are specified as follows:

$$lgdp_t = \beta_0 + \beta_1 lexp_t + \varepsilon_t \qquad (3.25)$$
$$lgdp_t = \beta_0 + \beta_1 lipm_t + \varepsilon_t \qquad (3.26)$$

After showing that all variables are integrated of order one, we can proceed to the cointegration tests. By using cointegration analysis we will test whether there is a long-run relationship between *lgdp* and *lexp*, *lgdp* and *limp*.

Table 3.3: The ADF Cointegration Test Results

Cointegration equation	Const. term	Coefficient	R^2	DW	ADF statistics
$lgdp_t = \beta_0 + \beta_1 lexp_t + \varepsilon_t$	3.963 (18.476)	0.554 (16.305)	0.841	1.529	-5.260*
$lgdp_t = \beta_0 + \beta_1 lipm_t + \varepsilon_t$	3.124 (17.781)	0.686 (24.654)	0.923	1.626	-2.827**

Note: The numbers in parenthesis are t-statistics. * and ** denote rejection of null hypothesis at 1% and 5%, respectively.

It can be seen from Table 3.3 that coefficients of both regressions have positive signs and are statistically significant. In other words, increases in exports and imports will raise real GDP. Thus, our results do not contradict with the theory.

Also error terms obtained from the cointegration regressions are stationary. For the visibility graphs of series relating to error terms are shown below. RESID01 shows error term relating to the equation $lgdp_t = \beta_0 + \beta_1 lexp_t + \varepsilon_t$; and RESID02 shows error term relating to the equation $lgdp_t = \beta_0 + \beta_1 lipm_t + \varepsilon_t$.

Figure 3.4: Variation of RESID01
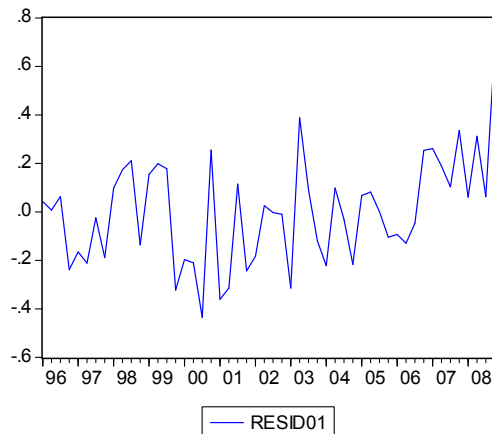
Figure 3.5: Variation of RESID02
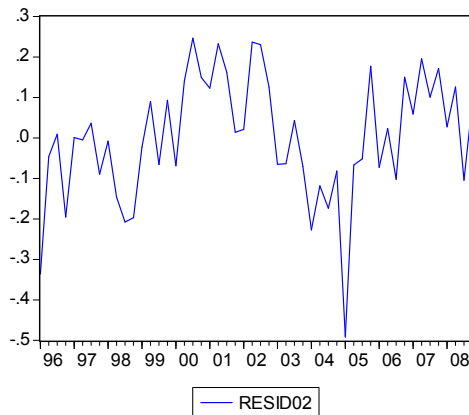
Stationarity of the both error terms, obtained from contegration equations, show that there is a long-run relation between real GDP and exports; between real GDP and imports.

According to regression results, 1 percent increase in exports will increase real GDP by 0.554 percent; 1 percent increase in imports will increase real GDP by 0.686 percent. So, 1 percent increase of the independent variables will affect dependent variable (real GDP) less than 1 percent in both regressions.

From Table 3.3 it is seen that the values of R^2 are high. But of course it could be higher, if more independent variables (like, investment, labor, etc.) are added to the equation (3.25). Because of the lack of the quarterly data for Azerbaijan, such variables couldn't be entered to the analysis.

According to Granger Representation Theorem, if there is cointegration between variables, then error correction mechanism must work. That's why in the next step this mechanism will be examined.

3.3.3. Error Correction Model

To examine whether a long-run equilibrium relationship between real GDP and independent variables exists, cointegration tests are employed. It is found that real GDP and exports (imports) are cointegrated; that is, there is a long run, or equilibrium, relationship between them. Of course, in the short-run there may be disequilibrium. Therefore, one can treat the error term as the "equilibrium error" (Gujarati, 2003: 824). And we can use this error term to tie the short-run behavior of GDP to its long-run value. The short-run dynamics will be examined by employing an error-correction model.

For obtaining the best error correction model for our analysis, we used Hendry's (1995) general-to-specific approach. In this way, we first include four lags[2] of the first-difference of all variables in our model, constant term and one lagged error-correction term, generated from the equations (3.25) and (3.26). In the next step, insignificant parameters were dropped and remaining parameters can show significant effects of used parameters to real GDP. Our error correction models, employed for determining short-run dynamics, will be:

$$\Delta lgdp = \beta_0 + \sum_{i=1}^{n} \beta_{1i}\Delta\, gdp_{t-i} \;+\; \sum_{i=0}^{n} \beta_{2i}\Delta\, \exp_{t-i} + \;\beta_3 EC_{t-1} \;+\; \varepsilon_t \quad (3.27)$$

$$\Delta lgdp = \beta_0 + \sum_{i=1}^{n} \beta_{1i}\Delta\, gdp_{t-i} \;+\; \sum_{i=0}^{n} \beta_{2i}\Delta\, imp_{t-i} + \;\beta_3 EC_{t-1} \;+\; \varepsilon_t \quad (3.28)$$

After applying Hendry's General-to-specific approach, we reached the following parsimonious models:

---

[2] Since the equation was generated by using quarterly data, four lags for each variable were included in the error correction model.

Table 3.4: Estimated Error Correction Model for *lgdp* and *lexp*

lag	EC(-1)	Δlgdp	Δlexp	Summary Statistics
1	-0.281 (-2.66)		0.179 (4.095)	R^2=0.470
2				Adjusted R^2=0.434
3		-0.554 (-4.976)		DW=2.027

Note: figures in parentheses are the t-statistics. The critical values at 10% and 5% are 1.29 and 1.66 respectively (1-tail).

Table 3.5 Estimated Error Correction Model for *lgdp* and *limp*

lag	EC(-1)	Δlgdp	Δlimp	Summary Statistics
0			0.112 (2.975)	R^2=0.950
1	-0.135 (-2.863)		-0.091 (-2.696)	Adjusted R^2=0.944
2				DW=1.976
3		-0.120 (-2.849)		
4		0.837 (15.997)		

Note: Figures in parentheses are the t-statistics. The critical values at 10% and 5% are 1.29 and 1.66 respectively.

Three diagnostic tests (R^2, Adjusted R^2, and Durbin-Watson) were presented in the tables. The results, reported in Table 3.4, show that the adjusted R^2 is not high. But on the other hand the second model has high adjusted R^2. Also the Durbin-Watson test statistic is used to find out whether the residuals are serially correlated or not (Durbin and Watson, 1951). Our findings show that the model used in this study doesn't suffer from problem of autocorrelation.

The coefficients of the error correction terms, estimated for both models, are statistically significant and have correct (negative) signs, confirming the evidence for cointegration of the variables in the long-run model established earlier. These coefficients indicate what proportion of the discrepancy between the actual and long-run or equilibrium value of real GDP is eliminated or corrected each quarter (Kasman A. and Kasman S., 2005). Coefficient of the error term, estimated for the first model, is -0.28, and for the second model it is -0.135. These results indicate that the adjustment of the real GDP to changes in the independent variable may take about 3.5 quarters in Azerbaijan, while using exports as a regressor; however it takes 7.3 quarters while using imports as a regressor. It means that, about 28 percent of the disequilibrium, will be

adjusted after one period providing approximation to long-run equilibrium for the first model. And about 13 percent of the disequilibrium will be adjusted after one period for the second model.

The signs of the coefficients are as expected: short-run changes in exports and imports have positive impact on short-run changes in real GDP. The short run coefficients, for both models are much smaller than their long run counterparts. The significant positive coefficients of real GDP, exports and imports are reconfirmed in both regressions.

Finally, and perhaps most importantly, it can be concluded that exports and imports have positive short-run effects on real GDP. The evidence from our error-correction models and from long-run models shows that both long-run and short-run dynamics are significant. Therefore, our findings support validness of an equilibrium relationship between the dependent and independent variables in each cointegration equations.

3.3.4. Granger Causality Test

Another aim of our study is to examine whether there is a causal relationship between the variables. If there is a cointegration vector between economic growth and exports, there is causality among these variables at least in one direction (Granger, 1986). Hence, Granger causality tests can be used to examine the nature of this relationship. Granger (1986) and Engle and Granger (1987) supply a test of causality, which takes into account the information, provided by the cointegrated properties of variables. The model can be stated as an error correction model as follows:

$$\Delta lgdp = \alpha_1 + lagged(\Delta lgdp, \Delta lexp) + \beta_1 EC_{t-1} + \varepsilon_1 \quad (3.29)$$

$$\Delta lexp = \alpha_2 + lagged(\Delta lgdp, \Delta lexp) + \beta_2 EC_{t-1} + \varepsilon_2 \quad (3.30)$$

$$\Delta lgdp = \alpha_3 + lagged(\Delta lgdp, \Delta limp) + \beta_3 EC_{t-1} + \varepsilon_3 \quad (3.31)$$

$$\Delta limp = \alpha_4 + lagged(\Delta lgdp, \Delta limp) + \beta_4 EC_{t-1} + \varepsilon_4 \quad (3.32)$$

where l*gdp, lexp*, and *limp* denote real GDP, exports and imports, respectively. $\beta_i EC_{t-1}$ is one lagged error-correction term, reflecting the long-run equilibrium relationship among variables. From Models 3.29-3.32, the short-run dynamics is provided by the lagged values of the difference terms.

For determining lag lengths, the models, created by one, two, three and four lagged series, were generated. After that, the best lag length was determined according to the Akaiki Information Criteria (AIC). The lag length of the model with the smaller AIC, will be the model's lag number. We found two lags for exports and real GDP, one lag for imports and real GDP. Table 3.6 and Table 3.7 show the results of the Granger Causality tests.

Table 3.6: The Granger Causality Test for *lgdp* and *lexp*

Dependent Variable	F-statistics		t-statistics
	$\Delta lgdp$	$\Delta lexp$	EC
$\Delta lgdp$	-	0.142	-0.800
$\Delta lexp$	6.992	-	-2.001**

Note: ** indicates significance level at 5%.

Table 3.7: The Granger Causality Test for *lgdp* and *limp*

Dependent Variable	F-statistics		t-statistics
	$\Delta lgdp$	$\Delta limp$	EC
$\Delta lgdp$	-	4.656 (1.339)	-2.059***
$\Delta limp$	4.010 (3.310)	-	-2.124**

Note: **,*** indicate significance level at 5% and 10%, respectively.

Table 3.6 reports results of the causality analysis of real GDP and exports. The error-correction term with $\Delta lgdp$ is insignificant; causality from exports to GDP does not exist. Hence, exports do not Granger-cause real GDP in the long run. The error correction term with $\Delta lexp$ is significant. From this, one can conclude that there is a long-term one-way causality between exports and real GDP, the direction being from real GDP to exports. This evidence shows that for Azerbaijan the export-led growth hypothesis is not valid.

It can be seen that there is bidirectional causation between imports and real GDP. From Table 3.7 we see that error correction terms in both models ($\Delta lgdp$ as dependent variable, $\Delta limp$ as dependent variable) are significant. These results prove that income and economic growth generated by oil-export boom, lead to a rise in import demand.

The increased inflow of foreign direct investments to the oil sector of Azerbaijan might be the reason the rejection of the export-led growth hypothesis in Azerbaijan. The share of the foreign capital in oil sector is remarkably great. Signing of "Contract of the Century" regarding the production of oil in the Caspian Sea in 1995, and construction of "Baku-Tbilisi-Jeyhan" oil pipeline between 2002-2005, increased the foreign capital flows to the country. In 1994, foreign direct investment to the oil sector was 137 million US dollar; in 2008, this figure increased to 3351 million US dollar. It means 2400 percent increase of the foreign investment inflows to the oil sector. These capital inflows affected the GDP and increased oil production and productivity in this sector. It might be the reason of the causality running from GDP to exports.

CONCLUSION

In this study, the export-led growth hypothesis was tested for the case for Azerbaijan using cointegration and ECM techniques for the 1996-2008 period. In the study, existence of a cointegration relationship and causality between exports, imports and GDP is tested.

It is known that most developing countries have identified export-led growth strategy as a key to economic growth and development. Also this strategy has been proposed by the IMF and the World Bank in the context of trade liberalization after 1980s. From this viewpoint to examine exports-GDP linkage for Azerbaijan is important.

In the study, first long-run relationship between real GDP, exports and imports is analyzed; and by using error correction modeling, short-run relationship between these variables is examined. According to the findings of these analyses, long-run and short-run relationships were found between real GDP, and exports and imports.

Second, the causal relationship between the variables is examined. The results reveal that there is bidirectional causality between imports and real GDP. But we fail to find support for the argument that exports Granger cause GDP growth. However, increase in real GDP Granger causes export. The findings of this study reveal that export-led growth hypothesis is not valid for Azerbaijan.

Azerbaijan is an oil exporting country. Increased domestic and foreign investments in the oil sector after 1995 caused GDP increases to increase exports. The volume of the foreign capital to oil sector is huge in Azerbaijan. After signing of "The Contract of the Century" in 1995, foreign capital began to flow to this sector; also foreign investment inflows also increased during building the "Baku-Tbilisi-Jeyhan" oil pipeline. From 1994 to 2008 the foreign investment to the oil sector increased by 2400 percent. These capital inflows resulted increases in GDP by increasing oil production and productivity in this sector. It might be the reason of the causality from GDP to exports.

This study made it possible to uncover that foreign trade structure of Azerbaijan is not satisfactory yet. The share of oil and oil products in total exports is 96 percent and consequently, the share of other goods is very low. This export structure is an indication of small-scale production of other goods in Azerbaijan that are expected to compete in world markets. Dependence of exports on oil can make Azerbaijan face the "Dutch Syndrome". Therefore, development of non-oil sectors of Azerbaijan must be in focus. Industrialization policies that will focus on production of non-oil products that would be exported, should be applied for long-run economic growth.

Bringing advanced technology in the country is also closely related to the production of high quality goods that will meet world standards and which in return reduce unemployment.

Vegetable, mineral and chemistry products are having the high share in imports of Azerbaijan, but Azerbaijan has available resources and capacity to produce majority of these goods in the country. So the structure of imports must be improved.

In order to have an efficient trade structure, imports and exports should be diversified and quality of exports should be increased. To achieve this goal, Azerbaijan must give importance to development of a manufacturing industry; and decrease the dependence of imports on food and consumer goods.

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APPENDIX

Normative-Legal Acts Adopted for Regulation of Trade Policy in the Republic of Azerbaijan.

- The Decree of the Cabinet of Ministers of the Azerbaijani Republic No. 222 of 2 June 1994 "On the Organization of the Foreign Trade of the Republic of Azerbaijan";
- " The Law of the Republic of Azerbaijan on Customs Tariffs" of 20 June 1995 (with amendments and alterations No. 583 of 1998 and No. 643-IQD of 1999);
- The Customs Code of 1997;
- The Decree of the President of the Republic of Azerbaijan No. 609 of 24 June 1997 "On the Further Liberalization of the Foreign Trade of the Republic of Azerbaijan";
- Resolution of the Cabinet of Ministers No. 91 On Import-Export Duty Rates dated April 22, 1998;
- The Decree of the President of the Republic of Azerbaijan of 23 July 1999 on the "State Program for the Development of Trade in 1999–2000";
- The Decree of the President of the Republic of Azerbaijan of 25 July 1997 "On the Approval of the Customs Code of the Azerbaijani Republic";
- The Decree of the Cabinet of Ministers No. 124 of 13 July 2000 "On the List of Articles that may be Imported into the Territory of the Azerbaijani Republic Free from the Payment of Value-Added Tax";
- The Decree of the Cabinet of Ministers No. 20 of 19 January 2001 "On the Level of Excise Duties on Excisable Goods Imported into the Territory of the Azerbaijani Republic";
- The Decree of the Cabinet of Ministers No. 80 of 12 April 2001 "On the Rates for Customs Duties Levied on Export-Import Operations and Stamp Duty on Customs Procedures in the Azerbaijani Republic";

- The Decree of the President of the Republic of Azerbaijan No. 782 On Improvement of Regulations of Issuing Special Permits (Licenses) for Certain Types of Activities dated September 2, 2002;

- Order of the Cabinet of Ministers No. 15s of 14 January 2005 to implement the Decree of the President No. 167 of 29 December 2004 "On the Application of the Law of the Azerbaijani Republic on Export Control";

- "The Law of the Republic of Azerbaijan on Export Control" of 26 October 2005;

- Resolution of the Cabinet of Ministers No. 135 On Rules for Issuing Quality Certificates for Foodstuffs Exported to the EU Countries dated July 13, 2005;

- Resolution of the Cabinet of Ministers No. 185 On Stimulation of Export in Certain Business Activities dated July 26, 2006;

- The Decree of the President of the Republic of Azerbaijan No. 218 On Regulation of Export of Foodstuffs to the EU Countries dated April 1, 2005 ("Decree on Foodstuffs");

- Rules on Determination of Country of Origin of Goods approved by Resolution of the Cabinet of Ministers No. 190, dated November 29, 2007;

- The Decree of the President of the Republic of Azerbaijan No. 12 "On Implementation of One-Stop-Shop Principle in the Inspection of Goods and Vehicles Passing through the State Border Checkpoints" dated November 11, 2008.