Growth and Development

A Review of ECO Performance with Emphasis on FDI

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The ECO[1] (Formerly Regional Cooperation for Development=RCD) was established in 1985 as a trilateral organization of Iran, Pakistan and Turkey to promote multi dimensional regional cooperation to create conditions for sustained socioeconomic growth in the Member States. Following the amendment in the Treaty of Izmir (as the legal framework for the RCD), ECO was fully launched in early 1991. In 1992, the Organization was expanded to include seven new members, namely: Afghanistan, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. The date of the Organization's expansion to its present position, 28th November, is being observed as the ECO Day. Over the past 13 years the member states have been collaborating to accelerate the pace of regional development through their common endeavors. Besides cultural and historical interdependence, they have been able to use the existing infrastructural and business links to strengthen their major economic decisions. ECO has started several projects in priority sectors of its cooperation including energy, trade, transportation, agriculture and drug control.

In this study, we evaluate the performance of ECO with emphasis on Foreign Direct Investment (FDI) and propose the appropriate policies for its future. Despite of this reality that ECO members have great similarities, but they are politically disaggregated. We try to consider economic and political factors simultaneously.

Based on formal data in 2004, ECO members had over than 380 million people (almost 6% of world population) that mean a potential market with EU market size. However, the per capita GDP in $US was $1548 that constituted about one-fourth of world average. Also, the unemployment rate in the region was relatively high (5.8%). This trend may be worsening because the average population growth rate (1.7%) is higher than world average. On the other hand, total FDI in the ECO countries was 9 billion dollars in 2004(only 1.4% of total FDI in the world).

So, to appraisal the FDI trends in the ECO countries, we need to consider the main factors affecting FDI. Some of these factors are per capita GDP, exchange rate, openness ratio, inflation rate, external debt and ICRG risk factor.

We will apply the econometric methods (Generalized Least Squares +fixed or random effects) with panel data over the 1992-2005 period. In this regard, the related tests including unit root test, Hausman test, Normality test… will be provided. It is expected that increases in per capita GDP, openness ratio and exchange rate(as devaluation form) will raise FDI, but inflation rate, accumulated external debt ,economic and political risks will decrease the FDI in the region.

Based on our conclusions, ECO members can benefit from their different relative advantages including large market for own and foreigners, tourism, historical and cultural linkages, idle capacities(including young and unemployed people) and various natural resources(mineral and non-mineral resources); and reach to sustainable

[1]Economic Cooperation Organization

development if they manage their possibilities and potentials; and provide the context to attract FDI without considering some dilemmatic political or religious resistances and pressures.

Introduction

The RCD (Regional Cooperation for Development) was first established in 1985 to promote multi-dimensional regional cooperation and create conditions for sustained socioeconomic growth among its founders, i.e. Turkey, Iran and Pakistan. Later, in 1991, the ECO was replaced for RCD following the amendment of Izmir Treaty. Finally, after collapse the USSR, some CIS members and also Afghanistan were joined to ECO in 1992. So, ECO currently has 10 members including 3 above-mentioned founder countries, Afghanistan, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan; and 28th November is known as ECO day. Over the past decade the member states have tried to exploiting similar cultural and historical characteristics and they have started joint projects in different fields such as energy, trade, transportation, agriculture and drug control.

In this study, we evaluate the performance of ECO with emphasis on Foreign Direct Investment (FDI) and propose the appropriate policies for its future. Despite of this reality that ECO members have great similarities, but they are politically disaggregated. We try to consider economic and political factors simultaneously.

Performance of ECO: Facts and Figures

Population Trends:

ECO members have more than 300 million people currently. Total population has increased from 341 million people in 2000 to 380 million people in 2004. Pakistan, Turkey and Iran have higher people than the other ECO countries and Republic of Kyrgyz has the least population (see figure1). Meanwhile the share of world population has increased from 5.62 percent to 5.98 percent during 2000-2004. Also, the rate of growth of population in the region ant world has been 2.74 percent and 1.16 percent respectively. As we know, the increasing rate of growth of population results in economic, social, cultural and political problems, if the distribution of resources, incomes and opportunities is unequal (Titelbaum, 1974). For example, in economic context, providing the increasing demand for food requires sufficient supply which can provide by domestic production of farm products or through imports them from exporting countries. In addition of food provision, the high rate of population has negative effects on per capita saving, balance of payments, health, infrastructures, education, social and political integration and stability; and over-exploitation of natural resources and environmental degradation.

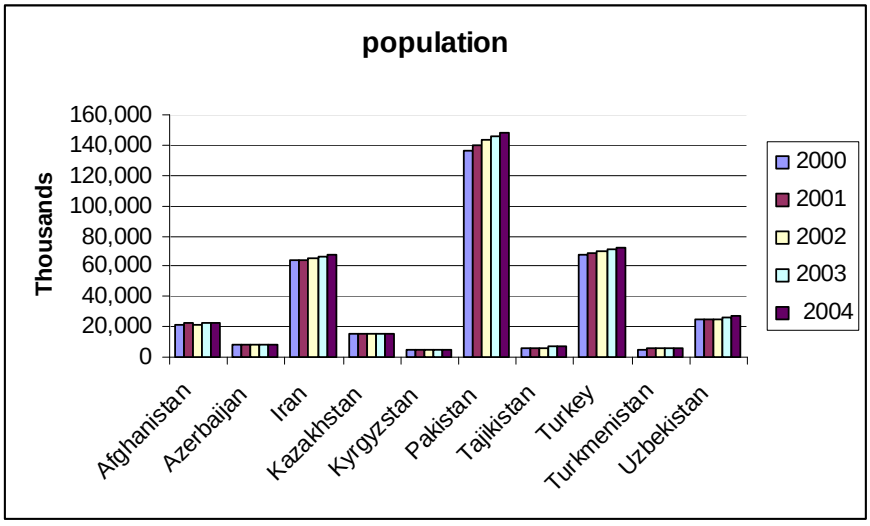


Fig1: the population trends in the ECO

Adult Literacy Rate

We selected this indicator because the literacy level has direct relationship with access to work skills, good social relations, acquisition of scientific and experimental information, attempt to achieve the health standards and so on(Blaug,1970). Thus it can be shown that more literate people have high skills, scientific stock, healthier lives and appropriate interpersonal relations. In the ECO region, most of countries have higher adult literacy rate close to 100 percent especially in the recent years. This fact is obvious from figure 2. The high rates belong to 7 countries independent from FSU (Former Soviet Union). It seems that education system of FSU, despite of deficiencies of the centrally planned regime, has been successful in upgrading the literacy level among different republics. However, this indicator has the lowest rate in Afghanistan(below 40 percent); and this is natural phenomenon for this country because of prolonged wars following the FSU attack to Afghanistan in 1980 and its occupation; and later domestic war resulting from Taliban's governance and existence various armed and paramilitary groups. Among the founder countries of ECO, the situation of Pakistan with adult literacy rate under 60 percent is worse than Turkey and Iran.

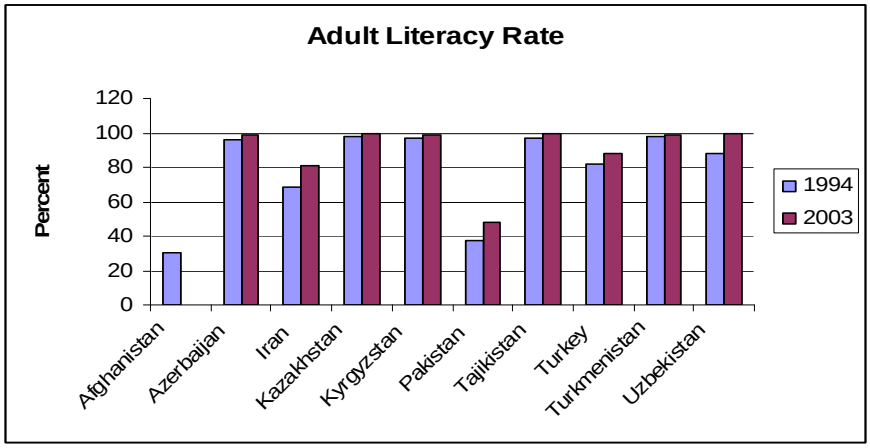


Fig2. Adult Literacy Rate in the ECO

Per Capita GDP

Per capita GDP is an indicator for the overall performance of an economy. It is affected by GDP and population developments. In the ECO, per capita GDP at current prices has increased from 908.4 US$ in 2000 to 1548 US$ in 2004. During this period, the corresponding values for the world have been 5190 US$ and 6321 US$. In recent years, ECO members had different fluctuations in per capita GDP. As shown in fig3, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan have recorded increasing per capita GDP, but Afghanistan, Iran, Pakistan, Turkey and Uzbekistan have volatile per capita GDP. Also, the difference between per capita GDP among above-mentioned countries is considerable, especially when look at Iran's and Turkey's per capita GDP. Despite of this reality that Iran is the net exporter of crude oil in the region, however its per capita GDP in 2004 is close to Kazakhstan's one and very fewer than Turkey's and Uzbekistan's ones.

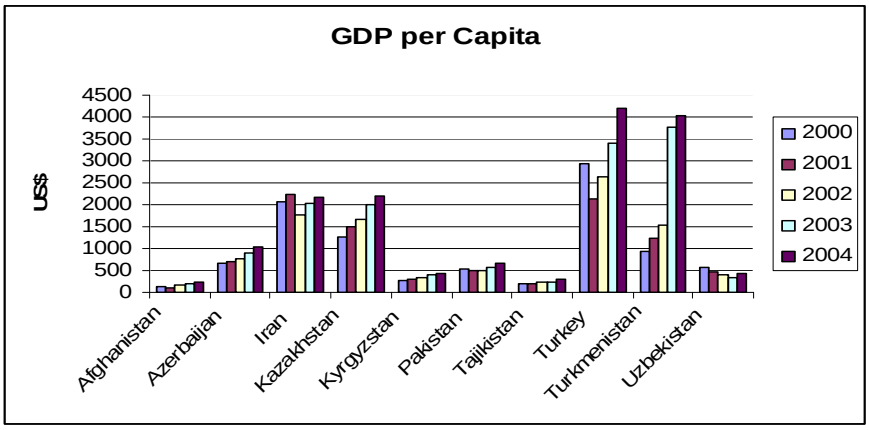


Fig3. Per Capita GDP in the ECO

Industrialization

As shown in fig4, except for Azerbaijan which has petroleum-based industries, the share of industry in GDP is below 50 percent for other countries in ECO. On the other hand, "between" 1993-2004, the importance of industry sector in Azerbaijan, Iran and Turkmenistan has increased, however for the other countries, we find inverse trends. If we divide an economy to 3 sectors including industry, agriculture and services, it can be shown that with changes in one sector share, the other sectors share changes too. So, for example the share of services in GDP for Turkey is more likely high because of its commercial and tourism potentials.

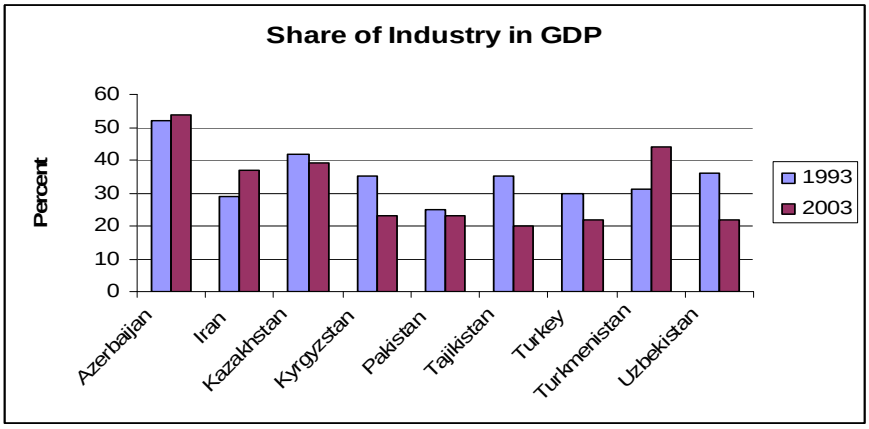


Fig4. The Industrialization trends in the ECO

Agriculture Situation

Agriculture is vital and determinant sector for growth and development of resources-dependent economies including ECO members. ECO countries have large capabilities and potentials in producing of strategic farm products such as wheat, barley, cotton, rice and sugar beet. Based on fig5, Kyrgyzstan has the biggest dependency to agriculture so that the share of its agriculture in GDP is nearly 40 percent. The main point of fig5 is the declining importance of agriculture all ECO countries during 1993-2003, except for Uzbekistan.

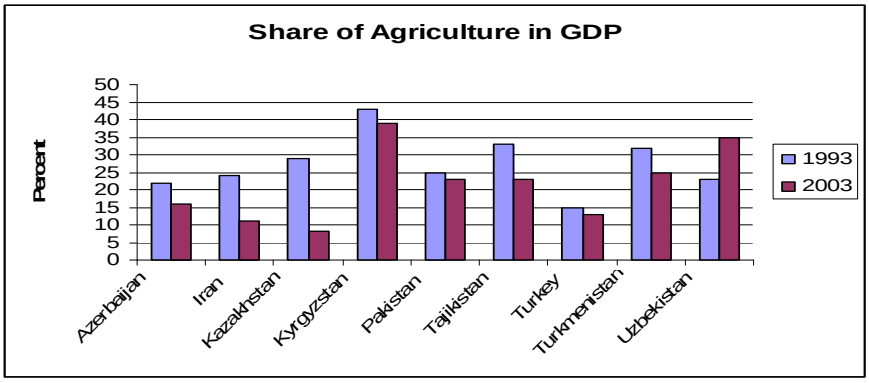


Fig5. The Agriculture trends in the ECO

By comparison two previous figures, we can infer that residual share of GDP in ECO members belongs to services sector.

General Prices Level

Inflation rate as an alarming factor to domestic and foreign investors plays vital role in the economic planning. Hyper inflation results in dropping of national currency value, but mild inflation may be influential in production and investment decisions (Tobin, 1972).

Among ECO members, Turkey had highest inflation rate in 2001, however following the government determination based on omission six zeros from Turkish Lira and other monetary and fiscal policies, this country could curb inflation, so that its inflation rate in terms of changes in consumer prices index(CPI) reached to almost 10 percent in 2004. During 2000-2004, most of ECO countries keep down or fixed the prices level, but some members such as Iran recorded stable 2-digit inflation rate(higher than 15 percent). The other successful countries in this regard are Afghanistan, Tajikistan and Pakistan (see fig6).

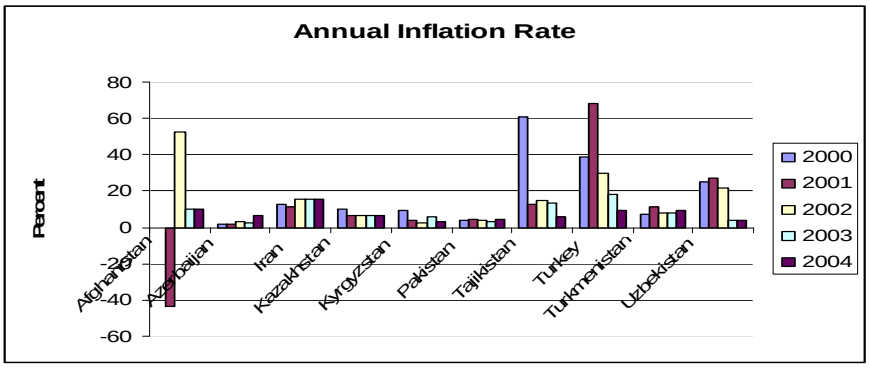


Fig6. The Changes of General Prices Level in the ECO Money Supply

A glance at fig7 indicates the monetization of 3 founder economies of ECO. Iran, Pakistan and Turkey have supplied 80 billion US$, 28 billion US$ and 65 billion US$ money in terms of its second definition, i.e. M1 plus quasi-money in 1998 respectively, but Iran has decreased its liquidity volume in 2003, vice versa Pakistan and Turkey have increased money supply. Comparison of fig6 and fig7 means that expansionary monetary policies in Pakistan and Turkey had positive impacts on economic growth and declining inflation. Another point is pertinent to newly attached countries to ECO. In these countries, monetization is pacing slowly and banking activities are not advanced.

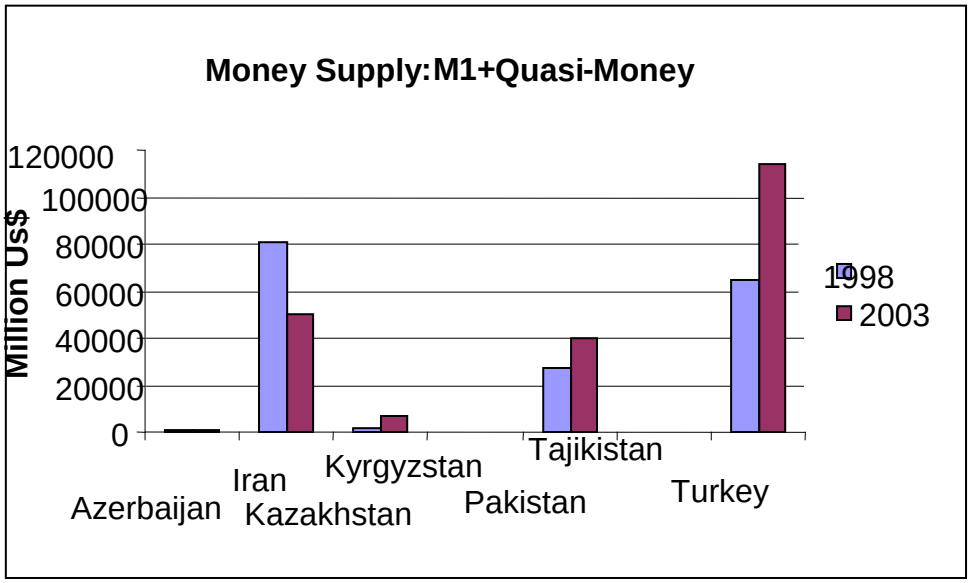


Fig7. Money Supply in the ECO

External Trade

Total External trade as sum of imports and exports of goods and services has continuously grown in the most of ECO countries. The highest total trade volume has belonged to Turkey, so we can regard this country as the most open economy in the region based on 2000-2004 commercial trends. Iran and Pakistan devote the second and third place to themselves in this context. The other members had maximum 20 billion US$ total trade with foreign countries, even total external trade reaches to less than 10 billion US$ in some members (see Fig8).

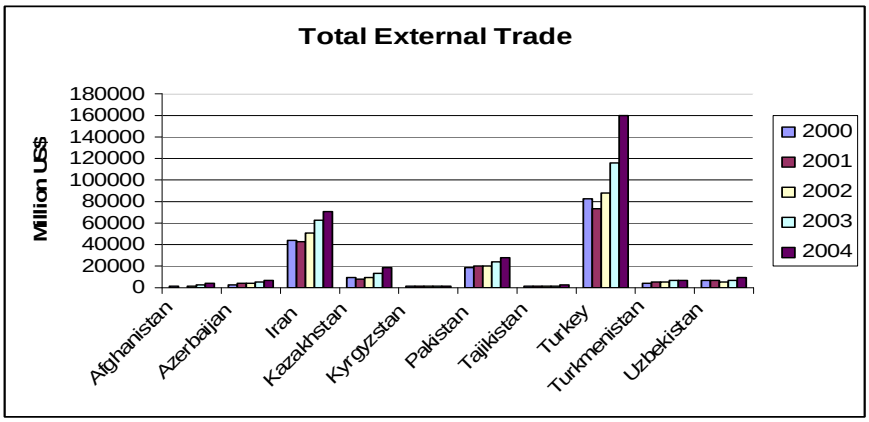


Fig8. Total external Trade Volume in the ECO Balance of Payments

The foreign sector of ECO members can be considered with another look at trade. We can refer to net exports .i.e. exports minus imports as measure for current account component of balance of payments (Bop). Fig9 shows that most of ECO countries except for Turkey had current account deficit in 1998, but this situation has changed so that Pakistan had highest surplus in current account; and Iran and Uzbekistan recorded total surplus in current account below one billion US$. If we ignore the exports of crude oil by Iran, the current account will be negative. On the other hand, Turkey has recorded highest deficit in current account (about 8 billion US$) in 2003.

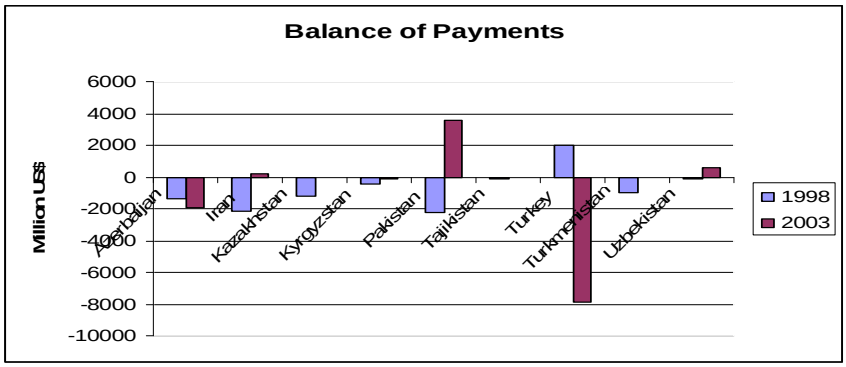


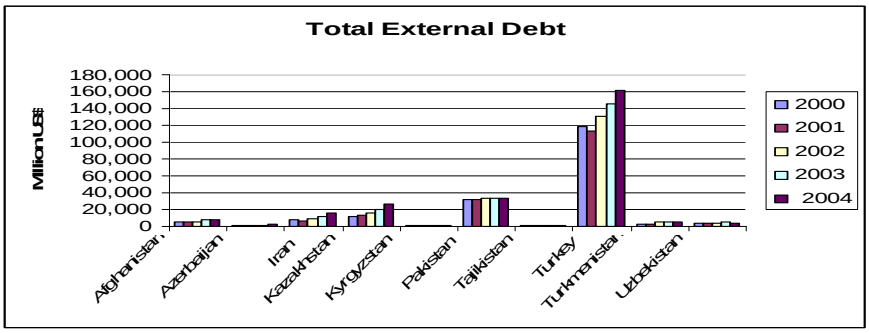
Fig9. Balance of Payments (Current Account) in the ECO

Exchange Rate

The official exchange rate indicates the units of national currency per one unit of foreign currency. Generally, in most of world and regional statistical documents the exchange rates are reported per US$. Based on trade principles, when a national currency is devaluated, i.e. its value is increased per one unit of foreign currency, and Marshal-Lerner elasticity condition holds ($|\varepsilon_X + \varepsilon_M| \phi 1$)[2], we can expect that devaluation results in more exports of national economy (Branson, 1988).

External Debt

High external debt is resultant of long-run domestic and foreign disequilibria. These disequilibria is exaggerated by upward interest rate in the international fiscal markets, the impact of recession on world trade and downward movements in prices of some raw materials which developing countries depend to their exports. The increased fiscal deficit in indebted countries results in decline of domestic investment and high volume imports. So, if accumulated external debt as a fraction of GDP is high, it means the indebted country has many difficulties in debt-service and creating general equilibrium in whole economy (Todaro, 1994). Fig10 indicates that Turkey has the highest total external debt among ECO members, so that its external debt recorded about 160 billion US$ in 2004. Pakistan, Kazakhstan and Iran located in the next ranks of indebtedness to foreign fiscal resources. Therefore, we can argue that when domestic financial assets including national savings and taxes are not sufficient for investment opportunities, the country in question can appeal to borrowing from foreign private or public banks such as World Bank and IMF, provided by manage debt correctly.



[2] $\varepsilon_X, \varepsilon_M$ are price elasticity of exports and imports respectively

Fig10. Total External Debt in the ECO

Table1: Official Exchange Rate (National Currency per US$) in the ECO

Country	Currency	Symbol	2000	2001	2002	2003	2004
Afghanistan	Afghani	AF	67.31	55.73	44.78	48	48.65
Azerbaijan	Azerbaijan Manat	AZM	4,474.20	4,656.40	4,860.80	4,910.80	4,913.60
Iran	Iranian Rial	Rls	8,188	8,008	8,019	8,323	8,793
Kazakhstan	Tenge	T	142.14	146.73	153.41	149.58	130
Kyrgyzstan	Som	Som	47.72	48.45	46.94	43.72	42.67
Pakistan	Pakistan Rupees	Pre/PRs	51.77	58.44	61.43	58.5	59.55
Tajikistan	Somoni	TJS	1.83	2.37	2.76	3.06	2.97
Turkey	Turkish Lira	TL (YTL*)	623,000	1,225,000	1,505,000	1,493,000	1,422,000
Turkmenistan	Turkmen Manat	TMM	5,200	5,200	5,200	5,200	5,200
Uzbekistan	Sum	SUM	236.2	423.31	769.5	971.2	1,051.02

Total Investment

The gross capital formation in each country can employ the idle capacities in different fields and sectors, keep down unemployment rate, increase per capita income, meet high share of domestic aggregate demand and raise the country's exports (Hirschleifer, 1958). The total investment in the ECO members indicates that Turkey, Iran, Pakistan and Kazakhstan have invested considerable amounts in 1995; and this trend has repeated by high amounts in 2003, so that total investment of Turkey and Iran is almost equal. Because of lack of data, some countries investments are not depicted in fig11.

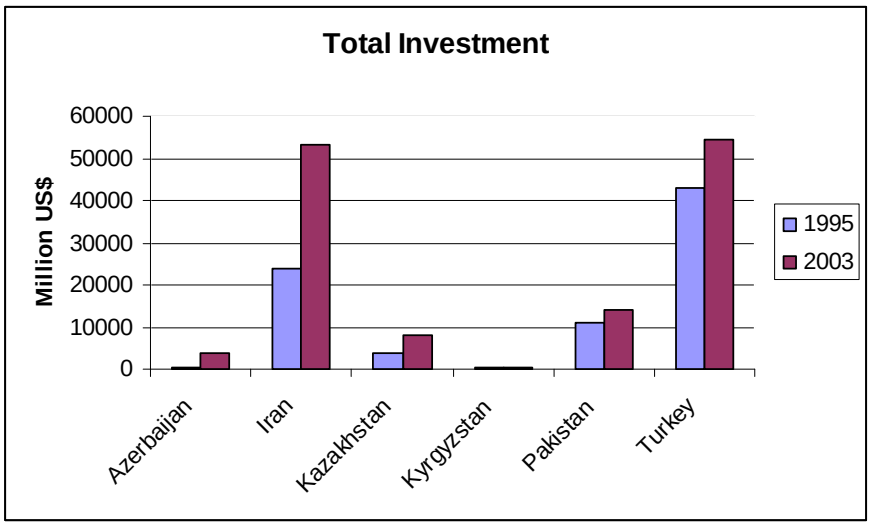


Fig11. Total Investment in the ECO

Foreign Direct Investment

As we said before, in this paper we focus on foreign direct investment (FDI). In section 3, we discuss the factors affecting on FDI in details. Here, we look at briefly to FDI trends in the ECO members. Azerbaijan, Kazakhstan, Pakistan and Turkey are leading countries in absorption of FDI in the region. However, the other countries including Iran have not used of FDI in large scale during 2000-2004. In Iran, the law of foreign investment recently approved by parliament; also this country has many investment contracts in form of buy-back especially in the oil-related industries.

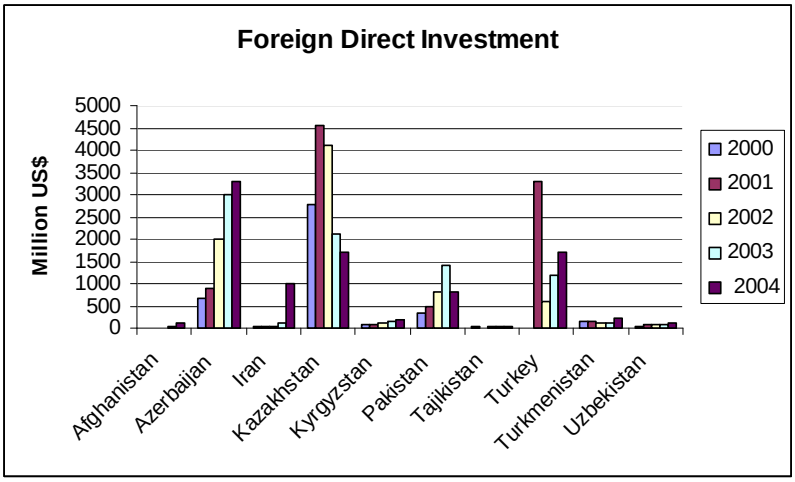


Fig12. Foreign Direct Investment in the ECO

Literature and Theory: FDI

The Eco members integrated to accelerate the free movement of production factors. So, regional economic integration is the first priority in the ECO. The major goals of economic integration are to avoid restrictions and government interventions within the bloc, to relieve cyclical fluctuations, and to increase national income (Balassa, 1961). Also, the major goals of Multinational Enterprises (MNEs) are to produce goods more efficiently and to advance their long-term profitability by undertaking FDI (Dunning, 1997).

Aarle and Skuratowicz (2000) define FDI as any foreign investment that results in a controlling stake of foreigners in a domestic production unit (in contrast with foreign portfolio investment or joint venture capital). FDI takes the form of (i) Greenfield investment, i.e. the establishment of an entirely new production facility owned by foreign firms, (ii) mergers and acquisitions –sometimes called Brownfield investment- especially in the context of privatization.

Theories of FDI can be classified into five subgroups according to different methodological backgrounds: (i) industrial organization, (ii) corporate investment theory, (iii) strategic theory and (iv) portfolio theory, (v) OLI theory. In the industrial organization based theories of FDI firm-specific aspects constitute the main determinants of FDI. Theories based on corporate investment analysis stress the locational determinants of FDI (e.g., the size of the foreign market, the presence of comparatively cheap factors of production, the presence of trade barriers). Strategically motivated theories of FDI concentrate on the interaction with local and international competitors and the desire to gain and maintain local sources of supply. Theories of FDI that focus on portfolio aspects are based on the notion that FDI enables firms to diversify their production and sales risks over more countries.

Dunning (1993) argue that three major sets of advantages determine FDI as OLI theory as follows:

(a) Owner-specific competitive advantages: ownership of tangible or intangible firm-specific assets such as brand name, technology, patent;
(b) Location advantages: large markets, lower transportation and labor costs, lack of import restraints, host government promotional policies, access to foreign consumers and superior infrastructure;
(c) Internalization advantages: intra-firm activity, commercial benefits accruing from FDI.
He refers to linkage between location advantages and host country policies, institutions, and economic conditions. In this regard FDI can be classified into two broad categories:
(a) Market- seeking FDI: tariff jumping and large markets;
(b) Efficiency-seeking FDI: export-platform investment in final goods and in internationally integrated industries in components and intermediate goods.

Firms tend to move to other countries to take specific advantages such as labor-intensive industries that have relatively lower real labor costs (Pain and Lansbury, 1997). Most of the studies of economic integration and FDI have focused on the Europe or European Union (e.g. Yannopolous, 1990; Yamada and Yamada, 1996; Dunning 1997; pain and lansbury, 1997) and NAFTA[3] (e.g.Eden, 1994; Vernon, 1994).

The Static effects of the removal of trade barriers achieved by economic integration could be divided into production and consumption effects, which relate to a shift in the demand for goods produced by member and nonmember countries that modify world production and trade patterns (UNCTC, 1990). The process of economic integration can enhance the location advantages of the markets of member countries by the distribution of location advantages across the markets, and then this enhanced location advantages can provide new opportunities to make more income through the production within the integrated area.

Dynamic effects of economic integration such as economies of scale, cost-production effect,trade-suppression effect, and product efficiency increase competitiveness of member nations derived from larger market size, more opportunities, and large scale economies. These effects result in higher level of income and more investment in research and development (R&D), and improve ownership specific advantages of regional firms (UNCTC, 1990).

UNCTAD considers the rate of growth of country and regional economies as the key variable in the realm of market-seeking component of FDI. The presence of raw materials, either low-cost or skilled labor, and physical infrastructure is important in the realm of resource-seeking FDI. On the other hand, in the field of efficiency- seeking FDI, the existence of regional integration schemes is very important.

Barrell and Pain (1997) argue that European integration has had an important effect on the pattern and level of FDI within Europe and this has been a major vehicle for the impact of competition on productivity. Policies pursued collectively by all European governments have helped to stimulate cross-border investments by firms particularly from inside and also from outside the region. Based on OECD FDI statistics, the stock of FDI as a percent of GDP rose markedly in the four large European economies i.e. Germany, France, Italy, UK, between 1989 and 2000.

Bosworth and Collins (1999) in a comprehensive study survey the effect of capital inflows on domestic investment for 58 developing countries during 1978-95 years. The authors distinguish among three types of inflows: FDI, portfolio investment, and other financial flows (primarily bank loans). They find that an increase of a dollar in capital inflows is associated with an increase in domestic investment of about 50 cents (Both capital inflows and domestic investment are expressed as percentages of GDP).

[3] North American Free Trade Area

An additional feature of FDI flows is that the share of FDI in total inflows is higher in riskier countries, as measured either by countries` credit ratings for sovereign (government) debt or other indicators of country risk (Razin,2003).

Theories of FDI can essentially be divided into two categories: micro (industrial organization) theories and macro (cost of capital) theories. The early literature that explains FDI in microeconomic terms focuses on market imperfections, and the desire of multinational enterprises to expand their monopolistic power (Caves, 1971). Subsequent literature centered more on firm-specific advantages owing to product superiority or cost advantages, stemming from economies of scale, multi-plants economies and advanced technology, or superior marketing and distribution (Helpman, 1984). According to this view, multinationals find it cheaper to expand directly in a foreign country rather than through trade in cases where the advantages associated with cost or product are based on internal, indivisible assets based on knowledge and technology. Alternative explanations for FDI have focused on regulatory restrictions, including tariffs, quotas, which either encourage or discourage cross-border acquisition, depending on whether one considers horizontal or vertical integrations.

Studies examining the macroeconomic effects of exchange rate on FDI centered on the positive effects of an exchange rate depreciation of the host country on FDI inflows, because it lowers the cost of production and investment in the host countries, raising the profitability of foreign direct investment. The wealth effect is another channel through which a depreciation of the real exchange rate could raise FDI. By raising the relative wealth of foreign firms, a depreciation of the real exchange rate could make it easier for those firms to use retained profits to finance investment abroad and to post collateral in borrowing from domestic lenders in the host country capital market (Froot, 1991).

FDI investors, who gains control of the firm and is endowed with management skills, has proper incentives to pursue proper monitoring of management. Furthermore, based on position of "intangible capital" in the source country, the FDI investor can apply more efficient management standards in the host country compared to domestic. The unique advantage to FDI, that has only recently been explored, is its potential for superior micro-management, based on the specialization in niches of industry in the operation in the source country.

In an integrated capital market, with full information, all forms of capital flows (FDI, loans, and Portfolio equity and debt) are indistinguishable. In the presence of incomplete information, these flows are significantly different from one another.

Shareholders, such as FDI investors, which take control of the firm, and are equipped with managerial know-how, can obtain the full benefits of their actions for themselves and therefore do not face the same free-rider problem.

Competition among potential FDI investors will drive up the price close to the price which reflects the upgraded micromanagement of the firm. The initial domestic owners will gain the rent, which is equal to difference between the FDI investor's shadow price and the initial owner's reservation price. If the competition between potential FDI investors is perfect, all the benefits from the superior FDI management skills accrue to the host economy, leaving the FDI investors with a return on their investment just equaling the world rate of interest. The gains to the host economy from FDI inflows can therefore be classified into two categories. First, there are the conventional gains that stem from opening the economy to the new flow of capital, thereby allowing a more efficient intertemporal allocation of consumption. Second, there are the intrinsic gains associated with the superior micromanagement by FDI investors. The entire gain of the FDI investors is captured by the domestic economy because of assumed perfect competition among these investors over the domestic firms (Razin, 2003).

The economic gains from FDI, relative to portfolio inflows, lie only in the efficiency of investment, since in both cases there are consumption smoothing effects and the same

world interest rate (r) prevails in the host country in the two regimes. In other words, the gains from FDI, in comparison to portfolio flows, do not include the traditional gains from opening up the domestic capital market to foreign capital inflows because these traditional gains are present also in the portfolio regime. Under some plausible conditions the size of the aggregate stock of capital is larger under FDI than under Portfolio equity flows (Razin and Sadka, 2002).

Now, we summarize the main factors affecting on FDI in the following:

1. Market Size: The size of a host economy is measurable by GDP. This indicator which shows locational advantage is a function of industrialization, population and commercialization of economic activities. Generally, GDP is high in the countries in which their economic activities are marketed or pass through marketing. Since a large market results in demand for goods and services provided by foreign investors, so, it may attain to scale economies and is able to decrease transactions and costs (Chandprapalert, 2000).

2. Openness Ratio: One of the main components affecting on absorption the FDI is openness degree of host economy for external trade. In an open economy, the importing of raw materials or some necessary intermediate capital goods for investing and exporting of finished products is easier. So, it is anticipated that economy openness results in positive effect on FDI levels. In the content of openness, we can refer to tax on trade and tariff and non-tariff barriers. These barriers have two dimensional natures. In one hand, when a host country follows an import-substitution strategy, raising tariffs can likely increase the capital inflows. On the other hand, when that country follows an export-promoting strategy, because of possible policies which trade partners adopt in one direction with host country, increasing tariffs can decrease the FDI inflows. Shah and slemrod (1991) in a study of FDI in Mexico, show that FDI in Mexico is highly elastic to difference between tax rates in guest and host countries.

3. Infrastructure Quality: The quality of infrastructure in the host country raises the productivity of investment. This indicator is measured by domestic investment. Indeed, a foreign investor prefers to invest in a country in which infrastructure (such as transport and telecommunication facilities) is strong, because the strong infrastructure will facilitate the distribution of goods and services (Erdal & Tatoglu, 2002).

4. Total Risk: risk is a measure of uncertainty and it can be classified in different kinds. The RSP group, who is responsible for provision of ICRG ratings, classifies the risk into 3 categories: political risk[4], economic risk[5] and financial risk[6]. For example, in the economic field, inflation rate as permanent an irregular increase in the general level of goods and services prices, with creating instability and economic uncertainty, decreases the effective demand or purchasing power in the host economy and impacts negatively on FDI. In reality, the share of FDI in capital inflow of a risky country is small. Another example is external debt of host country. The countries in which external debt is low and ability to debt is high, FDI grows. It can be observed an inverse relationship between FDI and external debt.

[4] The political risk components are Socioeconomic Conditions, Investment Profile, Internal Conflict, External Conflict, Corruption, Military in Politics, Religious Tensions, Law and Order, Ethnic Tensions, Democratic Accountability and Bureaucracy Quality.

[5] The economic risk components are GDP per capita, real GDP Growth, annual inflation rate, budget balance as a percentage of GDP and current account as a percentage of GDP.

[6] The financial risk components are foreign debt as a percentage of GDP, foreign debt service as a percentage of exports of goods and services, current account as a percentage of exports of goods and services, net international liquidity as months of import cover and exchange rate stability.

Data and Variables

Based on literature and theory, we first focused on many different variables. The initial sample of country in question was 10 members of ECO. However, because of lack of data about Afghanistan, we omitted this country from our sample. Also, initial study period was 1992-2005, as we proposed in the abstract, but there was the missing data problem for some countries during 1992-1994 and also for 2005. So we had to appeal two available data for 9 members of ECO excluding Afghanistan over the 1995-2004 periods. It must be emphasized that since ICRG ratings have linearity with our principle variables, therefore we separated the common components in the three risk indicators and focused on the 3 independent variables and one dependent variable for our analysis as follows:(In fact we constructed new rating for total risk)

1. **RPERGDP (Real Per Capita GDP)**: this variable is reflects three related variables, (1) GDP that indicates the market size (2) population became as divided GDP to population to get per capita GDP and (3) inflation rate, since the GDP and per capita GDP were in current US $, we used the US GDP deflator to adjust the nominal values.

2. **OER (Official Exchange Rate)**: since devaluation of OER results in promotion of exports and limitation of imports in the host country and adjust the current account, subjects Marshall- Lerner elasticity we applied two variables as a factor affecting on FDI.

3. **TRISK (Total Risk)**: This variable is based on rating of ICRG. If total risk is high then FDI will be low, so we anticipate a negative relationship between FDI and total risk index.

4. Finally, we considered the **Real FDI(RFDI)** as dependent variable. Here, FDI is adjusted by US GDP deflator because FDI figures were in current US $.

In data gathering, we used different statistical references:

1. Sesrtcic database of OIC countries;
2. Ecosecretariat statistical website;
3.WDI(2002); and
4.USbudget to provide GDP Deflator.

Model Estimation:

According to the previous paragraphs, we specify the following regression model in implicit form:

$FDI_{it} = f (RPERGDP_{it} , TRISK_{it} , OER_{it})$

In which i and t denote to countries and years respectively (i=1,2,…,9,t=1995,1996,…,2004). Theoretically, the signs of estimated parameters of 2 first independent variables will be positive and negative respectively, however, the sign of parameter pertinent to OER is ambiguous. This sign depends on domestic trade policies and macroeconomic environment of host countries. We used the 2 first independent variables with one lag because it is supposed that RFDI is affected by real per capita GDP and total risk degree with one year lag, however the official exchange rate is effective on RFDI in the same period. Before the estimation of the model we must to test the stationary of variables. Of course, stationary test is not customary in cross-section data, but in time series and panel data, we have some weak or strong non-stationary. So, for testing the stationary in our panel data we use Breitung(2000) approach. The results of unit root tests for the model variables applying Eviews5 software are reported in Table2:

Table2: Unit Root test Results based on Breitung Approach

Null Hypothesis: Unit root (common unit root process)		
Sample: 1995 2004		
Series: RFDI_AZE, RFDI_IRN, RFDI_KAZ, RFDI_KGZ, RFDI_PAK, RFDI_TJK, RFDI_TKM, RFDI_TUR, RFDI_UZB		
Exogenous variables: Individual effects, individual linear trends		
Automatic selection of maximum lags		
Automatic selection of lags based on SIC: 0 to 1		
Total (balanced) observations: 81		
Cross-sections included: 9		
Method	Statistic	Prob.**
Breitung t-stat	-3.53293	0.0002
Series: RPERGDP_AZE, RPERGDP_IRN, RPERGDP_KAZ, RPERGDP_KGZ, RPERGDP_PAK, RPERGDP_TJK, RPERGDP_TKM, RPERGDP_TUR, RPERGDP_UZB		
Exogenous variables: None		
Automatic selection of maximum lags		
Automatic selection of lags based on SIC: 0 to 1		
Total (balanced) observations: 81		
Cross-sections included: 9		
Method	Statistic	Prob.**
Breitung t-stat	-3.20288	0.0007
Series: TRISK_AZE, TRISK_IRN, TRISK_KAZ, TRISK_KGZ, TRISK_PAK, TRISK_TJK, TRISK_TKM, TRISK_TUR, TRISK_UZB		
Exogenous variables: None		
Automatic selection of maximum lags		
Automatic selection of lags based on SIC: 0 to 1		
Total number of observations: 70		
Cross-sections included: 9		
Method	Statistic	Prob.**
Breitung t-stat	-1.88457	0.0297
Series: OER_AZE, OER_IRN, OER_KAZ, OER_KGZ, OER_PAK, OER_TJK, OER_TKM, OER_TUR, OER_UZB		
Exogenous variables: None		
Automatic selection of maximum lags		
Automatic selection of lags based on SIC: 0 to 1		
Total number of observations: 75		
Cross-sections included: 9		
Method	Statistic	Prob.**
Breitung t-stat	-1.71712	0.043
** Probabilities are computed assuming asympotic normality		

Based on above table, RFDI, RPERGDP and TRISK variables are stationary in the level, however the fourth variable(OER) has unit root in the level which gets stationary with exerting the first difference. So, we estimate the mentioned model using Eviews5 software and final result is reported in Table3:

Table3: The Estimated Model with Pooled EGLS

Dependent Variable: RFDI?				
Method: Pooled EGLS (Period weights)				
Included observations: 9 after adjustments				
Cross-sections included: 9				
Total pool (balanced) observations: 81				
Linear estimation after one-step weighting matrix				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.76E+09	7.71E+08	7.480556	0
RPERGDP?(-1)	456072.5	171408.5	2.660735	0.0103
TRISK?(-1)	-1.39E+09	1.94E+08	-7.16513	0
_AZE--D(OER_AZE)	-2167373	417749	-5.18822	0
_IRN--D(OER_IRN)	9060.757	47346.37	0.191372	0.849
_KAZ--D(OER_KAZ)	-10040551	7867634	-1.27618	0.2075
_KGZ--D(OER_KGZ)	20666240	18418725	1.122023	0.2669
_PAK--D(OER_PAK)	-69335551	53974823	-1.28459	0.2045
_TJK--D(OER_TJK)	1.68E+08	5.04E+08	0.332342	0.7409
_TKM--D(OER_TKM)	-166765.9	89881.2	-1.8554	0.0691
_TUR--D(OER_TUR)	2044.813	239.0988	8.55217	0
_UZB--D(OER_UZB)	-1131936	1109677	-1.02006	0.3123
Fixed Effects (Cross)				
_AZE--C	1.02E+09			
_IRN--C	-40309548			
_KAZ--C	1.50E+09			
_KGZ--C	-6.16E+08			
_PAK--C	-3.49E+08			
_TJK--C	23403165			
_TKM--C	-1.86E+09			
_TUR--C	-2.88E+08			
_UZB--C	6.14E+08			
Fixed Effects (Period)				
1996--C	2.51E+08			
1997--C	1.11E+08			
1998--C	-17683278			
1999--C	-1.53E+08			
2000--C	-2.59E+08			
2001--C	-47931450			
2002--C	91426280			
2003--C	92614361			
2004--C	-67863778			
Weighted Statistics				
R-squared	0.901538	Mean dependent var		7.64E+08
Adjusted R-squared	0.851377	S.D. dependent var		1.11E+09
S.E. of regression	4.29E+08	Sum squared resid		9.74E+18
F-statistic	17.97319	Durbin-Watson stat		1.322897
Unweighted Statistics				
R-squared	0.819305	Mean dependent var		5.84E+08
Sum squared resid	1.13E+19	Durbin-Watson stat		1.401042

Now, the main question is about using fixed effects method. Indeed, We tried to estimate the model with random effects and to do a Hausman test, however we confronted

with a **near singular matrix** in the estimation process, so we could not estimate the model with random effects method.

As table3 shows, the sign of parameter of Real Per Capita GDP(PPERGDP) with one lag is positive and its magnitude is high,I,e it means that if real per capita GDP grows, the real FDI inflows into ECO countries will be high. Also, the impact of total risk(TRISK) with one lag on the real FDI is consistent with theoretical expectations. The major point is that the value of estimated parameter of TRISK(-1) is very low, that means higher risks result in non-desirability of FDI for guest countries or MNEs.

On the other hand, the effect of official exchange rate is uncertain on real FDI. In the ECO economies, various exchange, monetary and fiscal policies are exerted by policy-makers and authorities, thus we expect noncrisp impact of OER on FDI.

Concluding Remarks

The past performance of Economic Cooperation Organization(ECO) is a mirror for the future trends. As we mentioned in the text, foreign direct investment involves some preconditions. Some of these are domestic macroeconomic environment, social and political risks and openness degree of economy. Of course, the consideration of total variables affecting on FDI requires sufficient and up-to date data.

Most of ECO members have not strong database, or their macroeconomic data are secret and not reported. In this paper, we tried to consider the existing data and to shape our analysis. So, this work can be controversial issue and needs to complete by academics.

In summary, it can be said that because of low saving level, smallness of Tax to GDP ratio, the ECO members may be borrow funds from World Bank, International Monetary Fund and foreign banks. However, the common sense indicates the ECO members must act precautionary and appeal FDI, because foreign investors can provide the latest technologies, capital and work skills and the other advantages, while direct borrowing may be results in huge external debts and worsen the domestic socioeconomic conditions.

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