The Pakistan Development Review
45 : 3 (Autumn 2006) pp. 425–437

Intra-ECO Trade: A Potential Region for Pakistan's Future Trade

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A standard gravity model was applied to estimate the magnitude of potential trade flows between Pakistan and the nine ECO member countries. The major issue in this analysis is to explore that Intra- ECO trade has great potential for Pakistan and that it got lower share than its potential. The results from the gravity model confirm that ECO has a positive and significant impact on intra-regional trade. It suggests that intra-regional trade is lower than what would be predicted by the gravity equation, suggesting greater scope for regional integration among the ECO member countries. This is especially the case between countries that have a common geographical border. The privilege of geography and the existence of trade preferences among ECO members could be expanded to cover potential trade to neighboring countries.

JEL classification: F10, F12, F15
Keywords: International Trade, Pakistan's Trade, Gravity Model

1. INTRODUCTION

There has been a significant revival of regionalism in the world. Regional preferential trade agreements of different kinds have been established. As a result of such agreements, intra-regional trade has increased rapidly. The success of the European Union and ASEAN in promoting international trade and stimulating economic development has also encouraged other countries to form economic groups. Those countries that do not form a trade group would experience a reduction in their trade shares.

ECO member countries include: Pakistan, Iran, Turkey, Afghanistan, Azerbaijan, Kazakhstan, Kyrghyzstan, Tajikistan, Turkmenistan and Uzbekistan.

Seen in this perspective, in 1964 Turkey, Iran and Pakistan put foundation of "Regional Cooperation for Development (RCD)". Under RCD the cooperation was made in the fields of trade, communications, banking, industry, political and cultural affairs, railway and transportation. In 1985, the name of RCD was changed to Economic Cooperation Organisation (ECO). After the disintegration of Soviet Union it was realised to cooperate with the 'States' separated from Russian Federation. In May 1992, not only the Central Asian States got the membership of ECO, but also Afghanistan was included in ECO. In this way, the members of ECO increased from three to ten as Pakistan, Iran,

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Author's Note: The author would like to thank his mentor Dr Robert Teh for his valuable guidance; skillful assistance and constant support that he provided him during his research work in World Trade Organisation (WTO) Secretariat Geneva. Moreover, he owes gratitude to Dr Patrick Low Director Economic Research for providing him an opportunity to work in a prestigious institution of WTO for seeking the required assistance under the "Ph.D Support Programme" of WTO. He is thankful to Dr Michel Fisher and Dr Roberta Piermartini of WTO for their valuable inputs.

Turkey, Afghanistan, Azerbaijan, Kazakhstan, Kyrghyzstan, Tajikistan, Turkmenistan and Uzbekistan.

As for as the case of Pakistan is concerned, the country has a policy of having closer and growing relations with all countries in general and the neighbouring ones in particular. The establishment of RCD (Regional Cooperation for Development) in 1964 is a step towards this end. The revival of RCD under the new name of ECO (Economic Cooperation Organisation) in 1985 has institutionalised the traditional relations.

The countries of the ECO and the areas, which are now known as Pakistan, used to have trade relations in the past and the caravans carrying goods from Indus to Persia, Central Asia and then, bringing in return consumable goods to this area. So these countries had been trading with each other since centuries.

The available information presents a dismal picture of the current state of intra-regional trade in the ECO region. The member countries of the ECO still rely rather heavily on industrial economies for their exports and imports. The mutual trade in the region has been stagnant over time. The share of intra-regional trade in the world trade of countries of the region remained more or less stagnant around 6.0 percent in the year 2005. The intra-regional trade continues to retain a marginal character in ECO.

Keeping in view the above background of ECO countries in terms of status of their interrelated low share of trade, there is a need to strike the core issue in their mutual trade. The important and alarming question coming up is that why trade amongst ECO countries is so low and it could not rise up? It is essential to respond to this key question as it forms the basis of this paper. The rest of the paper has been developed to respond to this question and the methodology presented has been directed towards this issue and a well devised model has been placed to identify the magnitude of the mutual trade. Simplistically it can be said that there exists untapped/unexplored potentialities in the region, which requires to be harnessed through collaborative plan and action to achieve the target of higher intra-regional trade within the region.

2. METHODOLOGY

The model, methodology used and data issues are discussed in this section.

2.1. Model

A standard gravity model is employed to examine the central hypothesis that Intra-ECO trade has great potential for Pakistan and that the country got lower share than the potential in the Intra-regional trade. The model, accused in the past of lacking theoretical foundations, has regained respectability and is now accepted as a well grounded tool to analyse bilateral trade flows.[1] The gravity equation basically states that trade between two countries increases with their size and decreases with their distance, in a way that is reminiscent of Newton's law of gravity which says that the attraction between two heavenly bodies is proportional to the product of their masses and inversely related to the distance between them. The gravity model of bilateral trade, in its most basic form, says that trade between country *i* and country *j* is proportional to the product of *GDPi* and

[1]Discussions on the theoretical foundations of the gravity equation are to be found in Deardoff (1995), Frankel (1996) and Baldwin (1993) among others.

GDPj an inversely related to the distance between them. Other explanatory variables that are often added are other measures of size namely, population and land areas and dummy variables like common borders, common language and common membership in regional trading arrangements.

Using the model, trade is estimated as a function of a number of basic determinants among a reference group of countries which are assumed to exhibit "normal" trade relations. Parameter estimates based on the reference group are applied to the countries whose potential trade flows are of interest. The actual trade volumes of these countries can then be compared to the trade volumes predicted by the model.

Generally, the gravity model considers three fundamental determinants of trade:

(1) Size of the economy usually captured by GDP/GNP,
(2) level of development, as presented by income per capita, and
(3) transaction costs, captured by geographical distance.

Since its inception by Tinbergen (1962), this model has become a popular method of analysis due to its parsimony and to its empirical robustness. Work by Anderson(1979) and Bergstrand (1985) served to place this at first purely empirical model on a solid theoretical footing.

Due to its simplicity—in the sense that it demands few variables and can be estimated with data that stems from reliable international data sources—and because it includes geography as a determinant of trade, it has become a favourite means to analyse regional integration agreements. Further, although it was originally meant to describe trade among rich nations, the gravity model has proven to be equally good in the description of trade between poor countries, and between more and less developed countries.

Formally, the gravity equation can be written as:

$$Tij = ß0 + ß1 * GDPi + ß2 * GDPj + ß3 * PCIi + ß4 * PCIj + ß5 * DISTij$$

Where *Tij* is the trade between countries *i* and *j*, *GDP* and *PCI* are the respective gross domestic product and per capita income and *DIST* is the distance between them.

It is worth noticing that prices do not enter the gravity equation. As Hamilton and Winters (1994) point out, "this does not imply that prices are ineffective in allocating resources. Rather, the model should be viewed as a reduced form in which *GDP*, *PCI* and distance are the ultimate determinants both of trade and of prices (and exchange rates).[2]

We expect trade to be positively affected by economic size (GDP) and negatively related to distance (DIST). The coefficients on per capita income (PCI) could be positive or negative.[3] Since trade is expected to increase with the size of domestic economy (GDP), the expected sign of ß1 is positive. The GDP of the exporting country measures productive capacity, while that of the importing country measures absorptive capacity.

[2]Hamilton and Winters (1994), p 81.

[3]The impact of per capita income on trade is not straight forward. On the one hand, the Linder hypothesis says that intra-industry trade increases when countries have similar per capita income. On the other hand, the comparative advantage theory—which is premised on different factor endowments—predicts a decline in inter-industry trade when countries have similar income.

GDP per capita indicates the stage of development of the countries, it explains.[4] First, countries with higher income per capita may be expected to trade more than poorer countries because the latter tend to have a production structure that gives more weight to non-traded goods (subsistence farming and services). With development, trade in manufactures increases allowing for more complementary trade (manufactures against raw materials) and intra-industry exchanges. Second, in so far as development is led by a process of innovation or invention of new products, exports of high income countries will grow with the demand for new products. Finally, as Frankel (1996) points out, rich countries may trade more than poor ones simply because they also tend to be more open to trade.

Distance, in turn, may be seen as a general proxy for the costs of trade behind which lie a variety of factors. Since a large part of these costs are made up by transport costs, various studies have gone through very detailed and complex measures of shipping distances.[5] Differentiating between measures of land and sea distances, between harbours and from them to the trading centres, and taking into account specific geographical and political considerations that may at certain times make some routes more costly than others. Yet, the general agreement seems to be that the straight line (in fact the great circle) between capitals works as well as more complex measures.

In addition to the physical distance between countries, other factors do have an impact on the costs of doing international business. Cultural affinities, and the availability of information about the foreign market can be expected to play also a key role in the determination of these costs. To the extent that neighbouring countries can be expected to share many cultural traits, and that information from across the border is typically more readily available, a dummy for common borders, or adjacency, is normally also included in the gravity equation.

Finally, and for the same reasons, the sharing of a common language should also be included. Some studies constrain all languages to have the same coefficient while others include language specific dummies to capture this effect. In the present case, one dummy, for language is included in the model.

Once all the above factors are considered, it is possible to asses whether a formal trade agreement is being effective or not in concentrating trade among its members. To this purpose, dummy variables of bloc membership are added to the basic equation. If bilateral trade exceeds (or lies below) the 'normal' levels of trade (normality being defined as the sample's average bilateral trade flows) the abnormality will be picked up by the bloc variables.

The advantage of this method over other measures of success of formal agreements, say the increase in bilateral trade flows over a period of time, is that it allows isolation of the effect of the agreement from the size, income and the geographical location of the countries involved. Trade between Pakistan and Afghanistan, for example, may seem to be exceptionally large only because these two countries are neighbours. If proximity alone explains the intra-regional concentration of trade, the recovery of these economies in recent years would show itself in the rapid growth of their bilateral trade flows independently of any trade agreement among them. If that were the case, a non-significant bloc coefficient would show that, what at first sight strikes as a highly

[4]See Brada and Mendez (1985) and Frankel (1996).

[5]For a review of these see Frankel (1996).

concentrating trade agreement is only the expected outcome of what Krugman calls 'natural trading partners'. But if after controlling for size and distance and whatever other variables that either facilitate or impede trade among nations the bloc coefficients show significant results, then one can attribute this extra effect to the trade agreement.

2.2. Estimation

The following basic equation was estimated here:

$$Ln(Xij) = ß0 + ß1\ Ln(GDPi) + ß2\ Ln(GDPj) + ß3\ Ln(PCIi) + ß4\ Ln(PCIj) + ß5\ Ln(DISTij) + ß6\ (ADJij) + ß7\ (LANGij) + ß8\ (ECO)$$

Where *Xij* are the total exports of country *i* to country *j* (in thousand of dollars at current exchange rates).

GDPi is gross domestic product of country *i*.
GDPj is gross domestic product of country *j*.
PCIi is per capita income of country *i*.
PCIj is per capita income of country *j*.
DISTij is distance between country *i* and country *j*.
ADJ is dummy for common borders. ADJ takes a value of 1 if two countries have common border and 0 otherwise.
LANGij is the dummy variable for common langue which takes a value of 1 if two countries have common langue and 0 otherwise.
ECO is dummy for ECO block comprising 10 countries namely; Afghanistan, Azerbaijan, Iran, Pakistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkey, Turkmenistan, and Uzbekistan.
ECO is 1 when both countries *i* and *j* are part of the agreement and zero otherwise.

As trade is expected to increase with size of domestic economy (GDP), level of development (PCI) and common border (ADJ) and declines with distance (DIST), ß1, ß2, ß3, ß4 and ß6 should be positive, and ß5 negative.

2.3. Sample and Sources

The study covers 137 countries consisting of 10 ECO countries, 15 EC countries, 7 SAARC countries, 3 NAFTA countries, 11 LAIA countries and 91 other trading partners of ECO member countries. Ninety percent of ECO exports are covered by this sample. That gives 18632 observations (137*136). However, the model reports lower number of observations because of two reasons. First, there are some countries, which do not export to all partners in the data set. Second, since the model was estimated in logarithms, instances of zero trade between two countries were dropped from the datasets used in estimations.

The gravity equation was estimated for the year 2005. The export values for the ECO countries were taken from the UN COMTRADE database. The data for GDP and PC GDP was obtained from World Bank's "World Development Indicators". The data related to the distance between capital cities, countries sharing borders and common language was obtained from French Centre for Exploratory studies and International Information (Le CEPII, Centre d'Etudes Prospectives et d'Informations Internationales).

2.4. The Dependent Variable

There are two possibilities for measuring the size of a trade flow: at the point of export or at the point of import. Apart from the well-known differences in valuation—exports are valued at free-on-board prices, and imports usually at cost-insurance-freight prices—and apart from minor differences due to the time-lags between the recording of exports by the exporting country and the recording of the same flow as an import by the importing country, these two measurements should produce the same results. This analysis uses mostly export data, most of them obtained from the UN COMTRADE database.

2.5. The Treatment of Zeros

The data on bilateral trade flows is bound to show some zeros. These may reflect either the absence of trade, or simply the presence of very small amounts of trade that for statistical reasons are reported as zeros. This posses a methodological problem since all variables in the gravity model are in log form and the log of zero is not defined. There are three ways of dealing with this problem. One of them replaces zero by very small figures, say one thousand dollars. Conceptually, this is an attractive possibility because it allows the keeping of all observations in the sample including those that due to their smallness in value may not appear in the statistical records.

The problem with this method is that the log of very small figures is a relatively large negative number. Thus, small bilateral trade flows will be given very large weights.

Another method includes the zeros and uses a semi-log formulation that is the estimated with the Tobit technique which takes account of truncated data for the dependent variable. Finally, a third possibility is simply to exclude the zero entries from the sample and estimate it with OLS.[6] This latter is the simplest of all methods and has been widely used in previous estimations of the gravity model. This is the method followed here. As Baldwin (1994) puts it "Without question the (second) method is the right approach. It is however somewhat more difficult and most studies show that the resulting estimates are not substantially affected by the choice of the approach".

2.6. The Estimation Technique

The model was estimated using the OLS technique. The results are presented in Table 1. All basic gravity variables are significant and have the expected sign. The bloc coefficient show significant values for ECO.

3. RESULTS

The results of the model shows that the three standard gravity variables (GDP, GDP per capita and distance) are highly significant statistically at 5 percent level of significance. The same is the case with the adjacency and language variables which are also significant statistically at 5 percent level of significance. All variables have their expected signs. Table 1 presents the empirical results of the gravity model. The model's overall performance is quite good and compares favourably with other studies.

[6]For a discussion on the different estimation techniques see Frankel (1996), pp145–146.

Table 1

Gravity Model Estimation Dependent Variable is Total Exports: Method of Estimation OLS

Variable	Expected Sign	Coefficient	*t*-statistic
GDPi	+	1.095	102.13
GDPj	+	0.775	89.892
PCIi	+	0.076	5.67
PCIj	+	0.076	6.225
DISTij	–	–1.268	–56.505
Adjacency	+	1.062	9.183
Language	+	0.915	18.89
ECO		1.132	4.34
NAFTA		–0.981	–1.664
EC		–0.321	–2.048
SAARC		0.803	1.767
ASEAN		0.848	3.456
LAIA		0.409	1.965
Constant		–27.934	–82.808
Adjusted R2		0.64	
No. Of Observations		16265	

As expected, trade increases with both domestic and foreign GDP and with per capita income, and falls with distance. Significant coefficients for GDP confirm that international trade is strongly affected by the trading partners' incomes. The estimated coefficient on the log of the exporting country GDP at 1.1 indicates that when GDP increases by 1 percent, trade increases by 1.1 percent. In case of importing country the coefficient is 0.78, indicating that when GDP increases by 1 percent, trade increases by 0.78 percent.

The GDP per capita coefficient is also significant statistically, indicating that richer countries do indeed trade more than poor ones. The coefficient on the log of country *i*'s per capita GDP is about 0.08, indicating that trade increases by 0.08 percent when per capita GDP is increased by 1 percent in the case of exporting country. The value of the coefficient on the log of the importing country per capita GDP is also 0.08, showing that 1 percent rise in per capita GDP brings 0.08 percent increase in trade. The small values of the per capita GDP explain the fact that poorer countries trade less with each other.

The results of GDP and per capita GDP are more or less the same when compared with the findings by other studies. For example, Clarete, Edmonds, and Seddon (2002), with a sample of 83 countries report exactly the same coefficients (1.1 for GDP of exporting country and 0.8 for importing country's GDP). Frankel (1996), with a sample of 63 countries finds a coefficient for GNP of 0.93 in the year 1992. His findings for per capita GNP during the same periods are reported to be 0.13.

The coefficient on the log of distance is about –1.27 indicating that when distance between two countries is higher by 1 percent, trade between them falls by 1.27 percent. The value of the distance coefficient is large, reflecting that transportation and communication among most member countries are generally more costly and act as a significant barrier to trade. Cost-increasing trade frictions reduce the amount of trade observed; the greater friction, the higher proportion of given expenditure that goes on costs rather than the goods itself and the smaller the incentive for trade. This heavy impact of distance is in line with findings by other studies. Frankel (1996), with a sample of 63 countries between 1965 and 1992 finds a coefficient for distance of –0.77 in the year 1992. Hamilton and Winters (1992) using a measure of distance that combines sea distance plus the overland distance from ports to the economic centres of the countries concerned (19 industrial countries and 57 LDCs), get a coefficient of –0.8 in 1984-1986. Baldwin (1994), controlling for adjacency and using the great circle distance between capitals finds coefficients –0.88. Bikker (1987), without controlling for adjacency reports a coefficient for distance of –1.1. And Boisso and Farrantino (1995) finds coefficient –1.5 without controlling for adjacency.

In the case of adjacency, the results found here are a bit higher when compared with the previous studies. The value of the dummy for adjacency is 1.062. Since the dependent variable enters the equation in logarithmic form the correct way to read this coefficient is to take its exponent. This means that, for instance, two bordering countries were trading 189 percent [exp (1.062) = 2.89] more than two non adjacent countries. The adjacency dummy being significant indicates that the extent of trade flows between countries is, ceteris paribus, higher if these countries share a common border. This judgment of 'plausibility', however, is largely a subjective one. It is difficult to have a prior judgment of what the value of this variable should be. Indeed, a review of previous studies shows that, although adjacency is generally significant, the value of the coefficient varies greatly with the samples studied. Hamilton and Winters (1992), for instance, find a coefficient 0.8. In Baldwin (1994) adjacency has a coefficient of only 0.28. Frankel (1996) gets coefficients of around 0.60 for the years between 1980 and 1992.

Finally, the dummy for common language with a coefficient of 0.92 also show a heavy impact upon trade. This is a normal finding in gravity models estimations. Frankel (1996) finds a coefficient that fluctuates between 0.33 and 0.77 overtime (1976 to 1992) when nine languages (English, Spanish, Arabic, Chinese, French, German, Japanese, Dutch, and Portuguese) are constrained to have the same coefficient. When the five main languages are allowed to have different coefficients he finds that English and Chinese appear to be especially important. Soloaga and Winters (1999) find significant coefficients for Spanish (with a mean of 1.93 over the years 1980 to 1996), English (mean 0.33) and Arabic (mean 2.19).

3.1. Bloc Effects

If there were nothing to the notion of trade blocs, then the five basic variables in the gravity equation—size, per capita income, bilateral distance, common borders, and common languages—would soak up most of the variation in bilateral trade flows, leaving little to attribute to a dummy variable indicating whether two countries are members of the same regional grouping. Variations in intra-regional trade would be due solely to the

proximity of countries and their rates of economic growth. The dummy variable represents when both members of the country pair are among the ECO bloc. The estimated coefficient of ECO is significant statistically. The coefficient estimate is 1.1, indicating that two members of ECO countries trade 210 percent more among themselves, after holding constant for GDP, proximity, and the other gravity variables, than two otherwise similar countries would [exp(1.1) = 3.1].

The results of the coefficient of ECO bloc dummy are in line with the previous study of Clarete, Edmonds, and Seddon (2002). With a sample of 83 countries the study "Asian regionalism and its effects on trade" reports the value of 1.7 for ECO dummy coefficient. The value of the bloc dummy coefficient is lower in the present study. Perhaps, one of the main reasons of this lower trend is the large number (137) of countries in the data set of the present study. According to their findings ECO countries tended to trade more intensely among themselves at the expense of trade with the rest of the world. Estimates showed that intra bloc trade in the ECO region was higher at a statistically significant level in 1995 and 2000 than would be expected if the countries were not members of ECO.

Out of the six preference variables three (ASEAN, LAIA and ECO) are statistically significant at 95 percent confidence level, while among the rest three SAARC gives positive value but it is not significant statistically. In case of EC the coefficient for the dummy variable is negative with a statistically significant value.

The results for NAFTA bloc with a negative sign of dummy coefficient are reported to be insignificant statistically. For NAFTA bloc the same result is reported by Frankel. According to him the lack of significance could be due in part to the small number of observations: there are only three pairs of countries in NAFTA.

The dummy variable for membership in the same regional grouping SAARC is also not significant statistically, indicating that the preferential trading agreements among these seven countries did not yield trade creation benefits. The previous studies conducted confirm the insignificant effect in case of this bloc.

The ASEAN preference arrangement shows large positive effects. The high value of this coefficient may suggest that the economic integration effects of ASEAN are strong enough for the member countries of this group. In the estimates of the present study the value of ASEAN dummy coefficient is no doubt large and statistically significant but if compared with the findings of Frankel (1996), it is still lower than his findings. More or less the same difference is reported by Clarete, Edmonds, and Seddon (2002). Their explanation for why the results of their study differ from earlier research is that the data used in their estimates included new members of ASEAN, namely Cambodia, Lao PDR, Myanmar, and Viet Nam; while the earlier estimates did not. As a group of countries that are less developed and less integrated into the global economy than the previous five member countries of ASEAN, their inclusion in the gravity model may have diluted the effect of ASEAN on its trade within the PTA. The same explanation seems true in the case of the present study.

The dummy for LAIA bloc also reports a positive and statistically significant value but the result for the EC arrangements are not positive. I do not have a good explanation to the negative value of EC bloc. Perhaps, the absence of all the trading partners of EC in the data set might be one of the reasons for the negative value of this important economic integration.

4. PROJECTING PAKISTAN'S POTENTIAL TRADE WITH ECO COUNTRIES

In this section, the model is explored to predict Pakistan's exports to all the member countries of the ECO region. Using the parameter estimates produced by the gravity equation, we compare the trade volumes predicted by the model with that of the actual trade volumes of the member countries. This approach involves analysing the differences between actual and predicted figures for Pakistan's exports to ECO countries. Therefore, in this analysis firstly, the method of prediction will be explained, and secondly, the results of the predictions will be presented.

4.1. Method of Prediction

The study concentrates on analysing the results of Pakistan's predicted exports by using the following equation.

$$Ln(Xij) = -27.93 + 1.1Ln(GDPi) + 0.86Ln(GDPj) + 0.08\,Ln(PCIi) + 0.08\,Ln(PCIj) - 1.27Ln(DISTij) + 1.06(ADJij) + 0.92(LANGij) + 1.13(ECO)$$

The data for member countries GDP, PC GDP, the distance between capital cities, countries sharing borders and common language is utilised to estimate predicted trade.

The exercise would follow to apply the values of GDP etc. for Pakistan and ECO member countries, and estimate "normal" trade flows by inserting these figures into the above equation. This gives us an indication of the predicted trade volumes which prevail between these countries.

As can be seen from Table 2, Pakistan's actual exports to ECO member countries were below the levels predicted by the model in each but one of the cases examined. The exception is found for Pakistan's exports to Turkey, where the actual level is 12 percent higher than the predicted value. While on the other extreme, in case of Tajikistan the exports are only 3 percent of the predicted value and still 97 percent potential exist in case of Pakistan's exports to that country. Afghanistan, being the second biggest market

Table 2

Pakistan's Predicted Trade with the Reference Group

(Thousand US$)

Partner Country	Actual Exports	Predicted Exports	Actual Predicted Ratio
Afghanistan	222316.7	228463.7	0.973094
Azerbaijan	1811.428	8813.905	0.205519
Iran, Islamic Rep	41775.36	395510.2	0.105624
Kazakhstan	11291.11	91980.18	0.122756
Kyrgyz Republic	1128.448	12934.89	0.087241
Tajikistan	618.282	17072.92	0.036214
Turkey	110097.9	98044.97	1.122933
Turkmenistan	2094.967	15134.69	0.138421
Uzbekistan	7570.992	74867.81	0.101125

for Pakistan's exports after Turkey and having common border with Pakistan broadly matches the predicted value. The country received 97 percent of the exports which the model predicts for her. While in case of Iran the exports are only 10 percent of the predicted one, despite the fact that the country shares border with Pakistan. Among the Central Asian countries, Azerbaijan is the major market for Pakistan's exports which meets 20 percent of the predicted exports.

The results clearly indicate that there is considerable scope for an increase in Pakistan's exports to ECO member countries.

We have estimated the magnitude of potential trade flows between Pakistan and the nine ECO countries. These trade flows have grown in the recent years, particularly on the side of Pakistan's exports to these countries, but they still accounted for not more than six percent of total exports of Pakistan in 2005.

Using elasticity estimates generated by the gravity model for 2005, we compute predicted trade volumes for Pakistan with the ECO member countries. We find that Pakistan's export volumes are close to their predicted level in the case of Afghanistan, while in the case of Turkey they even exceed the predicted limit. There exit ninety percent gap between the predicted and actual trade volume of Pak-Iran bilateral exports, as the country at present is realising only ten percent of the exports from Pakistan.

By far the strongest potential for trade growth emerges in the case of Iran as well as all the six central Asian countries which are receiving less than fifteen percent of Pakistan's exports. Only in the case of Azerbaijan it is 20 percent.

While the rationale for expansion of Pakistan's trade with ECO countries is obvious, ground realities leave much to be desired. Pakistan's trade with ECO has never exceeded 6 percent. This seemingly insignificant level of trade is not indicative of a paucity of potential, but rather a reflection of several trade-inhibiting factors that must be overcome before Pakistan has a chance of expanding its trade with ECO countries to a meaningful level.

These constraints include: Non-availability of exportable surpluses of desired specifications**,** inefficiency in production processes, financial constraints, restrictive trade practices, communication gaps, customs procedures and transportation facilities.

Besides economic factors there are political factors causing a decline in the trade relations of ECO countries. Due to these factors the organisation has remained notable more for its potentials than its accomplishments. The ECO is to date short on accomplishments. At present there is more evidence of competition than of cooperation among the countries of the region.

5. SUMMARY AND CONCLUSIONS

To what extent has the sub-regional agreement in ECO region succeeded in concentrating trade among their members? no worth while empirical studies exist except the study by Clarete, Edmonds, and Seddon(2002) which suggests that this PTA has been efficient in doing so. According to their findings "ECO countries tended to trade more intensely among themselves at the expense of trade with the rest of the world. Their estimates show that intra bloc trade in the ECO region was higher at a statistically significant level in 1995 and 2000 than would be expected if the countries were not members of ECO".

At first sight, the increasing participation of the bloc's market on the total exports of its members also points in this direction. This idea is also supported by the results obtained here with the basic gravity model which includes the preferential trade agreement as the important policy variable that affect the direction of trade flows among the ECO member countries.

Indeed, what these results are showing is that the main determinant in the change of ECO countries trade flows in the past has been the process of regionalism. The main achievement of this economic integration seems to have been to redress a pattern of trade in the case of most of the member countries that was heavily distorted with the protectionist policies adopted by the countries in the past.

Finally, the results from the gravity model confirm that ECO has a positive and significant impact on intra-ECO trade. If the potential trade among ECO members is not being realised, it is due to other reasons. It is not due to lack of effectiveness of ECO. It strengthens the case for further trade liberalisation in the ECO region, possibly in the context of greater regional integration. Greater regional integration, in a way that is compatible with multilateral liberalisation, could contribute to growth not only by increasing trade and allowing regional producers to benefit from economies of scale, but also by encouraging foreign direct investment and the deepening of capital markets. In this regard, the recent initiatives in regional integration are to be welcomed: in 2003, the ECO member countries signed the ECO Trade Agreement (ECOTA) under which tariffs will be reduced for participating members to maximum of 15 percent as the highest tariff slab in eight years.

In summary the above analysis presented supports the hypothesis that intra-regional trade is too low. It further suggests that the member countries as a whole trade less with each other than what would be expected, especially the volume of trade with countries which have a common geographical border is relatively limited. The privilege of geography and the existence of trade preferences among ECO members could be expanded to cover potential trade to neighbouring countries. The results also verify the hypothesis that intra-regional trade has great potential for the countries of the region.

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