Effect of trade openness on economic growth economics essay

The relationship between trade openness and growth is a highly debated topic. If economy moves from autarky to free trade then we see that economy will grow more. The basic theorem is that some trade is better than no trade. So export and import is very important for economic growth. We are exporting agriculture products and importing machinery and raw material that use in production.

The practical literature shows that trade openness or liberalization affects output growth. Most of the studies have concluded that the openness of the trade system has positive relation with GDP growth [Ahmed, Yusuf and Anoruo Emmanuel (2000), Edwards, S., (1998), Edwards, S., (1992), Harrison, A., (1996), Iscan, Talan (1998), Santos Paulino (2002), Wacziarg R., (2001), Yanikkaya Halit (2003)].

Do open economies grow faster than closed economies? Almost all practical growth Studies have provided a positive answer to this question. The reason for this strong Bias in favor of trade liberalization is partly based on the conclusions of a wide range of empirical studies, which claimed that outward-oriented economies consistently have higher growth rates than inward-oriented countries. It is also partly due to the tragic failures of import-substitution strategies, especially in the 1980s and overstated expectations from trade liberalization.

Pakistan has gradually liberalized its trade system especially after 1988, when the government accepted the first IMF Structural Adjustment Program. After 1995, this policy gained greater momentum and WTO related

compliances have induced Pakistan to reduce import duties and eliminate various subsidies.

2. Literature Review

Ynikkaya (2003) estimated the effect of trade liberalization on per capita income growth for 120 countries for the period 1970 to 1997. He used two types of trade openness measures. The first openness measure was estimated by using trade volumes which include different ratios of trade variables (exports, imports, exports plus imports and trade with developed countries) with GDP. Another measure based on trade restrictiveness estimated by calculating restrictions on foreign exchange on bilateral payments and current transactions. The results of the GMM (Generalize Method of Movement) estimates showed that first group of openness, based on trade volumes were significant and positively related with per capita growth. However, for developing countries openness based on trade restrictions were also significant and positively related with per capita growth. He therefore concluded that trade restrictions in developing countries may cause faster GDP growth.

Edward (1992) used a cross country data set to analyze the relations between trade openness (trade intervention and distortions) and GDP growth of 30 developing countries over the period 1970 to 1982. In his model he used two basic sets of trade policy indicators, constructed by Leamer (1988). The first set refers to openness and measures of trade policy (tariff and Non Tariff Barriers – NTB) which restrict imports. The second set measures trade intervention and captured the extent to which trade policy distorted trade.

The results of the model, estimated by OLS, showed that all the four

openness indicators were positively related with real per capita GDP growth, while trade intervention indexes were found significantly negatively associated with GDP growth. These studies support the hypothesis that countries with a more open trade system have tended to grow faster, and a more distorted trade system will tend to grow slower.

Santos-Paulino (2002) examined the impact of trade liberalization on export growth for a sample of 22 developing economies from 1972 to 1998. He used the typical export growth function, which postulates that exports volume depends upon real exchange rate and world income. Trade openness is measured in two ways. First by the ratio of export duties to total exports, as an indicator of the degree of anti-export favoritism and second by a dummy variable " timing" of the introduction of trade liberalization measures. The results of OLS estimate showed export duty significant with negative sign and the dummy variable is also significant with a positive sign. Therefore it was concluded exports grow faster in open economies.

Edwards (1998) used comparative data for 93 countries to analyze the robustness of the relationship between openness and total factor productivity (TFP) growth. He used nine indexes of trade policy to analyze the connection between trade policy and TFP growth for the period1980 to 1990. Among these nine indexes, three were related to openness, a higher value of which denotes a lower degree of policy intervention in international trade. The other six were related to trade distortions, for which higher values denote a greater exit from free trade. The results of OLS estimates found trade openness indexes significant with positive signs and trade distortion indexes were significant with negative signs. This relationship suggests that

" More open countries will tend to experience faster productivity growth than more protectionist countries."

Ann Harrison (1996) used a general production function to analyze the relationship between openness and GDP growth. He specified GDP as a function of capital stock, years of primary and secondary education, population, labor force, arable land and technological changes. He used seven openness measures to test the statistical relationship between openness and GDP growth. The cross-section estimation results show only black market rate significant with negative sign. The country time series panel result showed that three variable, tariff and non tariff barriers with positive sign, black market rate and price distortion index used in dollar with negative sign, were found significant. Estimation for Annual data show two variables, tariff and non-tariff barriers, and black market rate, significant with negative sign. He therefore concluded that the choice of period for analysis, of relationship between trade openness measures and GDP growth, is serious.

Wacziarg (2001) investigated the links between trade policy and GDP growth in a panel of 57 countries for the period of 1970 to 1989. His study employs a fully specified empirical model to evaluate the six channels though which trade policy might affect growth. He measured openness through an index which consisted of three trade policy variables, Tariff barrier, , Non-tariff barriers and a dummy variable (liberalization status). The fixed estimate OLS results showed that three channel variables i. e., FDI inflows as share of GDP, domestic investment rate and macroeconomic policy, were significant. He

therefore concluded that there is a positive relationship between trade openness and GDP growth.

Iscan, Talan (1998) analyzed the effect of trade openness on total factor productivity growth for Mexican manufacturing industries for the period 1970 to 1990. To identify the differential productivity effects of openness to foreign trade and trade liberalization, two measures (i) foreign trade variables, controlled by export share and (ii) measure of protection, control by effective rate of protection, were considered. He also used a dummy variable controlled for the date from which the liberalization of trade was started (i. e., 1986). The results of the GMM estimations showed that after liberalization productivity growth has positive and significant relationship with exports, while change in effective rate of protection was found negative but significant. It was therefore concluded that liberalization has positively affected productivity growth.

Ahmed, Yusuf and Anoruo, Emmanuel (2000) investigated long run relationship between GDP growth and openness for five South East Asian countries, The Philippines, Indonesia, Malaysia, Singapore and Thailand, for the period 1960 to 1997. They used export plus import growth rate as substitute of openness. The Johansan estimation results rejected the hypothesis that there is no co-integration between economic (GDP) growth and openness while the hypothesis that error correction term is significant could not be rejected. This Vector Error Correction estimates showed bi-direction causality.

Sinha D., Sinha T. (2000) analyzed the effects of growth of openness and investment on the growth of GDP for 15 Asian countries during 1950 to 1992. They developed a model which specified GDP growth a function of growth rates of openness (export plus import), domestic investment and population.. The Auto Regressive Model (ARMA) results show that for China, Hong Kong, Iran, Iraq, Israel, Myanmar, Pakistan and Singapore, the coefficient of the growth of openness is positive and significantly different from zero. For China, Hong Kong, Indonesia, Israel, Japan, Jordan, Philippines, Singapore and South Korea, the coefficient of the growth of domestic investment is positive and significantly different from zero. In some cases, the coefficient of the growth of population is negative but in all such cases, it is not significantly different from zero. Thus, they find support for the proposition that the growth rate of GDP is positively related to the growth rates of openness and domestic investment. However, the relationship between the growth rate of GDP and the growth rate of population is not that clear cut.

3. Model and data

We will use GDP growth (annual %), Gross capital formation (annual % growth) as Investment, Exports of goods and services (annual % growth) plus Imports of goods and services (annual % growth) is equal to Trade growth, Inflation, consumer prices (annual %), Population growth (annual %). we will get data from world bank. We will use OLS method in our model GDP growth depend on trade growth (export plus import growth rate as proxy of openness), population growth and investment growth. The volume of trade (import plus export) will be used as proxy of openness. We will derive the following equation.

GDP = B0 + B1 TRD + B2 IN + B3 I +B4POP+ Îµ

Where GDP refers to GDP growth, TRD to trade growth – proxy for openness, I to Investment growth and POP to population growth, IN inflation, while e is the error term.

The main objective of our study is to find the relation between trade growth and GDP growth.

And we will use OLS method to see that trade cause growth. Iqbal, Baig and Tahir (2002) found that policy liberalization leading to an increase in imports may lead to a growth of output. Moreover, Iqbal, Tahir and Baig (2001) argued that import of Pakistan is mostly consisting of intermediate goods (petroleum, machinery, chemicals etc.) which are favorable to output growth, so the impact of import growth on output is positive.

The result shows that GDP growth is positively related to trade growth. As the Pakistan trade increases its GDP also increase, means economic growth of country will increase. Inflation is negatively related to GDP. Whereas investment increases then GDP or economic growth will increase. And Population has positive relation with GDP growth.

When trade grows will increase GDP because with trade growth increase than production also increase and employment also increases. When country export and import will increase mean the country start increase the level of production so in this way employment will also increase. Inflation will increase than price of domestic goods will increase as result export will decrease. And country growth will also decrease. Investment positively related to GDP. When investment will increase than more new industries

open and employment will also increase and so country production will also increase. As result of this GDP will increase . Population increases, more labor force is injected into market as result labor supply will increase so it is fundamentals input and as result its output will increase.

In this study the inflation have negative relation with growth. This can be explained in two ways. One when purchasing power decreases than demand will decrease and as a result GDP will decrease. So it means growth will also decrease. Second in this way that when inflation increases than cost of production will increase, prices of goods produced will increase so the demand will decrease as result output will decrease and growth will decrease.

For variable significance can be check by t-test. So our most important variable trade growth is significance mean this variable has significant effect on GDP growth. But our other variable is not showing significant relationship because of data problem. R-squared is 0. 601552 which shows that our model is significant and sixty percent variations in GDP explained by explanatory variable. And Durbin-Watson stat is 2. 057520. So mean there is autocorrelation in model.