Chapter

1

Introduction

1.1 Background

Economics and trade are embedded terms from the period of the emergence of economics as a separate discipline till today. Trade has always been an indispensable part of the economy and the impact of trade on economic variables like growth, poverty, and income distribution have engaged researchers from the times of mercantilism up till, the recent era of globalization. World trade organization (WTO) being in the phases of implementation, significance of openness to trade has become a major debate in international economics. The importance of trade has never been underpinned in economics. However, its importance has grown over the years as being a cohesive factor for economic development and growth.

Trade, serving as a driving force for development and growth in the world economy. Today's globally integrated economic system of the world has stimulated economies to indulge in the enhancement of trade. Exports and imports not merely tender the demand-supply gaps rather they are used to achieve certain goals in the economy, like export led growth or import substituting industrialization. The progressive effect of trade liberalization on the economy has been questioned on several grounds. Its roots can be found in the debates of the early 17th

century, where arguments towards protectionism have laid a foundation of mercantilism. But the proponents of free trade have provided a support for trade liberalization. In recent decades broad liberalization and treaties of regional cooperation have changed the outlook of the subject.

The protectionist policies diluted over time, regional cooperation's like (North American Free Trade Agreement) NAFTA, (General Agreement On Tariff and Trade) GATT, then the formation of the (European Union) EU followed by (Association of South East Asian Nations) ASEAN and (South Asian Association for Regional Cooperation) SAARC and many more have emerged in the recent time transforming not only the economies but also shaping the globalized world.

The trade liberalization policies can affect the economy in several ways. These policies can lead to pave a path for growth and development or in some other cases these policies may turn out to be abhorrent. The major cause of trade liberalization not being sterile is due to its impact on trade balance, and this research intends to investigate the impact of trade liberalization on the balance of trade, imports and exports in the SAARC region.

1.2 Significance of the study

The significance of this study is to enfold the details of trade liberalization's impact on the SAARC nation. This research intends to identify, what really the SAARC region has gained over the years. Is there an improvement or decent as far as balance of trade accounts are concerned, and has this policy been successful.

One may question Why balance of trade is important? There are few reasons to consider. The first reason is that, if trade deficit gap increases with the trade liberalization for a long period this can be a cause of further impairment of the economy. Secondly, such deficit can be detrimental

for the economy when targets of higher gdp growth rates are to be achieved and even maintaining growth. And thirdly, this gap between imports and exports can induce the economy to get indebted if the volume of this gap enlarges.

The SAARC region is selected on the basis of few similarities among them not only geographical but also qualitative. One of the qualitative similarities shared by these nations is being a developing nation. The second similarity shared by SAARC nations is that these nations adopted broad liberalization in 1990's and extended the trade relationship in the region.

To achieve higher growth and improvement of the economic outlook, these nations have adopted the (Regional Trade Agreement) RTA known as (SAARC Preferential Trading agreement) SAPTA in 1991 under the SAARC arrangement for the enhancement of domestic trade relationship. Another step was towards strengthening this RTA is the establishment of SAFTA (South Asian Free Trade Area) which would enable these Asian Nations to integrate into a common market and an economic union. The implementation of SAFTA started in 2006 is paving a path for regional trade growth.

The Trade liberalization regime in SAARC nations with respect to such RTA's or broad liberalization have shown different evidence as quoted by the proponents of trade liberalization, or the skeptics. A few researches have evidenced a positive impact of trade liberalization on the growth of Gross domestic product, employment and income distribution. Some of the researches have also evidence the worsening of the domestic industry.

1.3 Objective of the study

The objective of this research is to find that, how trade liberalization adopted by the SAARC region has impact the import growth, export growth and the balance of trade in the region. The second objective is to compare the trade liberalization effects on exports, imports and balance of trade for the post liberalization era in the SAARC nations. By achieving these objectives, we try to find out that has liberalization really turned the tides of economic performance of the SAARC nations, or there is a discontent prevailing in terms of the deterioration of the balance of trade, hence leaving these nations in the deficit of balance of trade.

1.4 Organization of the study

This research includes five chapters. The second chapter comprises review of literature, where the evidence is gathered from both the developing economies and South Asia. The third chapter includes methodology and an overview about data, variables and estimation technique. Fourth chapter gives a detailed discussion on the result of research and the last chapter concludes the research.

Chapter

2

Literature Review

This chapter covers the empirical evidence of the research conducted previously in the field. This chapter is comprised of two sections the first section takes into the account of evidences from developing and developed nations. And the second section comprises the existing evidence from the SAARC region.

2.1 Empirical Evidence from Developed and Developing nations

The debate on trade liberalization extended to a comparative analysis of the post and pre liberalization performance of the economies in the nexus of such debate research conducted by (Dornbush, 1992) discusses the merits and demerits of trade liberalization in developing countries' research explains the experience of different developing nations adopting the trade liberalization and causes of protectionism in a detailed manner. The comparative analysis of Turkey, Mexico and Korea further explains the different aspects of problems faced by these nations after the implementation of trade liberalization and research also explain the benefits associated with post trade liberalization.

Discussing the limitations of trade liberalization policy regimes in developing countries (Rodrik, 1992) argues that trade policy reforms can only be fruitful if the limitations of policies in the context of developing countries is taken in accordance with the credibility of reforms introduced.

In certain cases it was found that trade reforms introduced in developing countries led to a condition of multiple equilibrium in the economy. As linkage between macroeconomic performance and market structure was missing, such gaps cannot lead to sustainable trade liberalization especially in the case of developing nations. Policies should be made by considering a number of factors such as macroeconomic stability and type of market structure, so that the results of trade reforms may be progressive.

The critics of trade liberalization present a view that, this process induces economy towards more imports (Greenaway and Sapsford, 1994) analyses, the effect of trade liberalization on export growth, this paper takes into account the sample of 19 countries and establishes the export growth relationship an in depth analysis of 3 different models reveals a mixed type of results and further augmented model is used to capture this effect. The improvement after trade liberalization is reported in some countries like Spain, Sri Lanka, Columbia, whereas there is deterioration for the other countries in the analysis.

Analyses of the trade liberalization effects on exports and GDP growth in less developed countries by (Shafaeddin, 1994) examining the trade liberalization regime of 1980s adopted by these developed nations in the form of reduction in the tariff and non-tariff barriers, these nations also reduced export taxation and the currency devaluation was used as a tool to enhance export growth. This policy of trade liberalization, exchange rate devaluation to induce investment and export expansion only resulted to be significant in the East Asian regions, whereas the African nations performed poor and research suggests that trade policies must be development oriented and backed by financial and technical assistance. The policy of the devaluation of currency is not a favorable tool; rather exports can only be enhanced if market access is provided to these nations for the purpose of exports.

The link between trade liberalization and investment led growth on defining the mechanism for trade liberalization to be beneficial for the domestic industry by decreasing trade barriers and enhancing the capital formation by the process of increasing exports is presented by (Baldwin and Seghezza, 1996). This research argues that anti-growth effects of domestic and foreign trade barriers become problematic to achieve export led growth and protectionism is the major cause for the rise of the cost of the new capital formation in the economy which lowers investment rate and decreases the export growth domestically.

On the debate of trade liberalization being damaging to the economy is criticized by (Edwards, 1997) analyses, the cross sectional evidence of trade liberalization on income distribution and growth, the stylized facts taken into account by the researcher shows that trade liberalization imparts positive effects on income distribution and growth and the economic improvement occurs in terms of the growth and income distribution across trade partners and arguments which are against trade liberalization are not strong enough to explain that openness tends to create inequality.

Considering, the trade liberalization effects on firm level performance (Ocampo, Antonio and Taylor, 1998) takes into account capital market, exchange rate and interest rate. By considering both micro and macro level analysis research explains that the problems of trade liberalization in developing countries are due to factors like rent seeking, low productivity and technological constraints. Regarding East Asian countries', this research explains the trade liberalization regime adopted in the 1980s by East Asian nations was associated not towards a broader liberalization, rather it was associated with the only outward export orientation of East Asian industries. However, trade liberalization is not always for developing nations rather it paves the

path for enhancement of export growth and distributional changes in income are also beneficial if tackled correctly.

Macroeconomic performance and trade liberalization are often questioned on the bases of export growth of the economies in this context (Bleaney, 1999) presents evidence from ten Latin American countries explaining the aftermath of trade reforms on macroeconomic performance and export growth. The post trade liberalization era for this sample is found to be less responsive after the trade liberalization was introduced and variables like GDP growth, investment and export growth in majority cases evidenced a decline rather than improvement. Export sector analyses unfold that improvement in the real exchange rate or appreciation of domestic currency caused a positive impact on the income elasticity of the exporting sector, with an improvement in the export sector, this appreciation of the domestic currency in the long run may offset the advantage. The trade liberalization effects being positive on exports may not be sustainable and a platform for growth.

The analyses conducted by (Frankel and Romer, 1999) explains the relationship between trade and growth, and research asserts that despite the correlation existing between trade and income the possible effects of trade causing growth cannot be identified by geographical variables or instrumental variables to remove such an endogenous relationship between trade and income and concludes that there is a positive relationship between these variables.

Trade liberalization began as an important debate in 1990's to understand the effects of this policy shift (Edwards, 2001) gives a review of trade liberalization and growth in a set of ninety - three nations for the analysis of the relationship among openness and total factor productivity by evaluating the previous evidence of the earlier studies this study uses the 9 indices of trade policy

to capture the effect of total factor productivity and openness. Research is critical of the previous studies regarding modeling and poor quality data finds out that more economies are open to trade have a relatively higher growth rate of total factor productivity.

The analysis by (Paulino, 2001) takes into view the sample of selected developing nations. and establishes a relationship between trade liberalization and import growth as import demand is a function of import price and income elasticity it directly reacts with trade liberalization when the tariff and non-tariff barriers are reduced hence lowering the prices of imports. The fixed effect model for this research shows that the reduction in import tariff has increased imports significantly and the trade liberalization dummy variable has shown also a positive impact on import growth. This asserts that trade liberalization has shown an encouraging effect on import growth and import duties being negatively related to import growth any kind of quantitative and qualitative restriction can decrease the import demand and vice versa.

The proponents of trade liberalization and skeptics of this phenomenon have arguments in favor and against the trade liberalization. One of the skeptics of trade liberalization (Rodriguez and Rodrik, 2001) presented a cross country analysis of the trade policies which induced lower trade restrictions by relaxing the tariff and non-tariff barriers to achieve higher growth rates. This research criticizes studies on the basis of methodological issues, strategies adopted and indicators used to capture the effects of openness on overall economic performance. This research indicates there is a poor tendency of proxies used to estimate the relative changes in trade barriers, rather indicators used to only capture the economic performance in terms of total outflows and inflows of trade and GDP. Research further suggests that protectionism is not a better situation but trade liberalization not having strong and contingent effects, so it could be viewed as the only choice

for economies to achieve higher growth and all nations should adopt trade liberalization. The policies should be in line with the situation faced by the economies.

Considering the effects of trade liberalization on import demand (Thomokos and Ulubasuglu, 2002) analyses, the Turkish economy in post and pre liberalized regimes on the bases of import demand elasticity, and then comparing these elasticities with developed nations, the research reveals that the product groups made by the researcher shows that products in these groups have shown an elastic income demand for imports after trade liberalization and imports have increased significantly. These changes in import demand after the trade liberalization have also altered the consumption of domestic goods.

The research by (Irwin and Tervio, 2002) examines the endogenous effects of trade on the income of the economy. A disintegrated effect on the bases of the time period selected from the 20^{th} century also takes into account the geographical variables to establish an exogenous relationship between trading countries on the bases of geographical location, trade and income. Research asserts that the rich or higher income group has a greater tendency to involve in larger trade volumes based on geography and historical advantages. Being more open to trade is due to these factors when compared with low income countries being relatively disadvantaged in the above-mentioned variables.

In the stream of openness indicators (Wacziarg and Welch, 2003) introduced a new measure for liberalization which differs from (Sach and Warner,1995) criteria which included the average of the tariff rate imposed, the average rate of non-tariff barriers, the black market exchange rate, the state's monopoly on exporting sector and the socialist system. This research revisited the Sach and Warner criteria and the proposed amendments by including some new economic and

qualitative variables including macroeconomic performance, counter reactive policies towards trade liberalization, political instability and sustainability. By including these variables evidences of trade liberalization was found that the relationship between GDP growth and investment is positive and significant. The research also suggests that, countries having a lower growth rate or negative growth rate have experienced political instability, poor macroeconomic performance and the implementation of trade reforms in these nations was mishandled, resulting in the unexpected decline in growth rates.

Trade liberalization is not only viewed as removing import tariffs, but also it plays a vital role in enhancing the exports of a country, the overall effects of trade liberalization are translated on the balance of trade. A study by (Parika,Corneliu and Stribu, 2004) discusses the relationship between trade liberalization, economic growth and trade balance in 42 developing nations. The cross country analysis based on the time effect of trade liberalization in these nations has shown different trends in different time periods. This time wise analysis shows that from 1970 to 1979 there is a decline in economic growth and trade balance is deteriorated.

The improvement is shown by these variables from 1980 to 1989 and the results for the third era 1990 to 2000 are insignificant., East Asian nations being the leader on the basis of improvement in the balance of trade and growth in the 1980's. The African and Latin American nations have shown deterioration in both balances of trade and growth in both the periods. These mix results show that there is a different impact on different regions in different time periods.

Research conducted by (Paulino and Thirlwall, 2004) describe the substantiation of trade liberalization on balance of payment, imports and exports. This research includes inter regional effects as well as a region wise effects of trade liberalization. Research suggests that there is a

positive effect of trade liberalization which tends to increase the growth of exports and growth of imports. This research analyzes the trade liberalization effects on the developing nations and finds out that economies under the trade liberalization have shown worsening effects due to the capital outflow and managed exchange rate. This has turned the coin towards the deficits in the trading sector. The deterioration of balance of trade account after liberalization has deteriorating effects in Latin America and Africa. Whereas, the research suggests that Asian economies have a rather low rate of the trade deficit, when compared with the other developing nations. The research also shows that a trade deficit as an aftermath of trade liberalization, may involve economies towards a higher debt burden to finance these deficits.

To explain the impact of bilateral and multilateral trade liberalization reforms in developing nations (Bussolo and Nictea, 2005) research discusses the rationale of such trade reforms for the elevation of poverty and income distribution. The dynamic gains from trade liberalization can enhance the economic growth of the economies if these policies cover the issues of government revenues, market failures, price volatility and risks involving trade liberalization, considering the microeconomic and macroeconomic analysis explicitly and also by combining the both approaches this research establishes a link between trade and poverty and shows trade liberalization changes the income distribution in such a manner, that the income is concentrated to the urban areas.

Analysis of developing countries by (Shafaeddin, 2005) on trade liberalization and economic reform finds the impact of trade liberalization in 1980s. This analysis is based on the evidence from East Asian, African and Latin American countries. The research reveals an interesting finding of a post trade liberalization era for East Asian nations resulting in an improvement of export growth and similar trade reforms adopted by Latin American and African nations not only

showed decline but also deindustrialization was observed in these economies. Economies became more vulnerable as private investment tends to fall deteriorating the economic output. The major cause of such decline in these regions is due to the immaturity of domestic industry in terms of export exposure to foreign trade, still out of the total 40 percent of the industry in these regions showed improvement and expansion of export growth. Research suggests that for policies to be fruitful economies in these regions should have started trade liberalization once their domestic industry had achieved maturity. The decline in export growth can be compensated by giving appropriate attention to the domestic industry to reach its maturity level.

A research conducted by (Lopez, 2005) involves time based evidence in Mexico, when in two different-time periods, Mexico adopted trade liberalization regimes under broad liberalization and NAFTA. The descriptive analysis of the trade balance and GDP growth rate shows a negative trend for the number of years resulting in trade deficits. The disaggregated analysis of sectors show that sectors like textile, leather etc. have improved from a deficit towards attaining surplus under NAFTA reforms whereas time series trend analysis of trade liberalization and growth modeled with the balance of payment constraint reveals that broad liberalization of 1980's, did not perform well as NAFTA reforms did. However, a relative betterment in terms of increased elasticity of import demand and relatively lower export growth is the major consequence of the lower growth rate of GDP in the long run.

The Latin American analyses of balance of payment and trade liberalization by (Lopez and Thrilwal, 2005) analyses the trade liberalization effects on balance of payment and growth in Latin America, study takes into account pre and post trade liberalization eras of 17 Latin economies. Pooled estimates of these economies suggest that out of 17 nations only 9 countries were able to maintain higher growth rates whereas 8 nations had a lower growth rate even after

the trade liberalization was introduced. The overall growth performance of these Latin economies was not impressive and a number of countries faced huge deficits on the current account. Only in Chile and Venezuela trade liberalization effects were favorable and balance of payment account of two nations did not worsen off.

The opponents of trade liberalization are of the view that this type of policy creates an inequality of distribution of income. (Toan N. M, 2005) takes a similar pledge by using a computable general equilibrium model of the Vietnam economy and finds out that due to the trade liberalization the income gap between urban and rural households gets wider, urban household income increases in the cost of rural households and overall welfare effects on the economy are negative.

In the analyses of income elasticity of demand for imports (Lopez and Thrilwal, 2006) presented a case of Latin America, observing the phenomena that how the countries explicitly includes the income elasticity of demand for imports and GDP growth response to trade liberalization. Based on the Rolling Regression for trend analysis and embodied in the balance of payment constraint growth model the analysis of 17 Latin American nations on pooled data as well as considering the individual position of each country between 1997 to 2002 income elasticity of demand for imports, exports and balance of payment equilibrium reveals that trade liberalization has not only turned to be beneficial only for few nations but also the gap between export growth and import growth has further widened. The economy not adjusting for these effects of trade liberalization faces a crisis on its balance of trade account.

Considering the tradeoff between growth and balance of payment after trade liberalization (Lopez and Thrilwal, 2007) finds that trade liberalization in major countries of Latin America

have shown improvement in the gdp growth rate whereas the balance of payment did not improve by this regime, and trade liberalization did not result as a radiant policy for the improvement of balance of payment for these economies.

Another analysis on the trade balance and the impact of trade liberalization by (Ju, Wu and Zeng, 2009) takes the analyses of the previous studies and measures trade liberalization effects on trade balance using the measure proposed by (Li, 2004) and (Wacziarg and Welch, 2008) separately to specify the impact of trade liberalization in developing countries on overall trade balance. Considering Li and Welech criteria the impact of trade liberalization on imports is stated to be significant and positive which implies that trade liberalization in developing nations have led to the enhancement of import growth. The impact of trade liberalization on exports is positive. This implies that countries after trade liberalization have also exported more, but when the overall trade balance is considered these criteria's give different results.

The Welech criteria or measure shows that there is an overall negative impact of trade liberalization on balance of trade. The Li's measure gives little evidence about worsening of the trade balance and shows that the trade balance deterioration is negligible. The research also provides an interesting finding that as shown by the previous studies, the magnitude of declining trade balances is less, when studied in the context with the above mentioned criterion, this implies that exports and imports have both improved after the trade liberalization regime is adopted by the developing countries and the mixed nature of results show that the basic difference of impact of trade liberalization on trade balance is due to the measure being used to account the phenomena.

Trade, fostering growth and income is questioned by (Kim, 2011), this research examines a distinctive effect of trade between the developed and developing nations, linking the income differences between the two groups of nations on the bases of geographic dissimilarities and the extent of government policies, affecting the income and growth of the sample. Using the threshold instrument variable technique to avoid the endogeneity of trade openness, research includes the set of 61 countries showing that the trade openness imparts a different nature of effects on income and growth. Based on the differences of initial income, its effects are positive in case of high income countries or developed nations, whereas in case of low income nations or developing nations this effect is negligible. Research concludes that factors like financial development and inflation also pave a path for the differences from gains of trade in developed and developing economies.

The dynamic perspectives for the export response for the Ecuadorian firms being benefited by post trade liberalization reforms is shown by (Correa, Dayoub and Francius, 2011) which states that technological changes introduced and economies of scale are enhanced by trade liberalization. The research emphasis the trade liberalization may or may not lead towards a static or dynamic gain, but technologically advanced and research driven factors can improve the industrial output and export capacity of the firms.

Considering the case of trade liberalization and balance of payment constraint with intermediate imports (Blecker and Ibarra, 2012) provides a new dimension in the understanding of trade liberalization effects on balance of payment. Trade liberalization in the case of Mexico, researcher critically analyze, the previous studies and tries to fulfill the missing gap, intermediate goods and real exchange rate are taken as variables to establish a link between balance of payment and trade liberalization. Hence, trade liberalization by this analysis becomes responsible

for the economic slowdown which includes both the supply side and demand side factors more over the market irregularities in Mexico have played a vital role in worsening off balance of payment.

Examination of the general equilibrium effects of trade liberalization on regional trade balances by (Shakur, 2012) is a description of the outcome of broad liberalization schemes introduced by becoming the signee of WTO, the countries still faces a number of issues, the conflict of such broad liberalization schemes are the protection of interest between the developing and developed nations. Developed nations are viewed as the proponents of trade openness have shown a positive trend of trade liberalization on balance of trade whereas the developing nations having large trade deficits faces a debt crisis. A disintegrated analysis of total merchandised trade in developing and developed nations shows that trade liberalization in agriculture and food items has worsened the position of developing nations. The textile, clothing and leather sector which are regarded as the major industry of the developing nations is more worsened off by the trade liberalization regimes. This negative effect of trade liberalization can be improved only if the trade process is conducted on the grounds of fair competition.

Analyses of the trade liberalization regime introduced in the Islamic Republic of Iran by (Jani et al. 2012) explains that Iran not being a member of WTO and sanctioned on the economic arena it is less open to the globalized trade. The study reveals that the ARDL and ECM estimates reveal that despite sanctions and a non-member of WTO the Iran economy has shown a positive and significant relationship of trade liberalization and the balance of trade. This may be so because Iran cannot be considered as a full-fledged open economy, but these results are still convincing and confirms that openness to trade or trade liberalization will benefit Iran's economy.

2.2 Empirical Evidence from SAARC

Research on SAARC nations reveals an improvement of exports after SAPTA was formed. A similar evidence is presented by (Bandra and Mcgillivory, 1998) the research on SAARC nations taken as an individual country analysis reveals that post SAPTA, SAARC nations have shown an improvement in gdp growth and trade to gdp ratio. A decline in the tariff rate is a major cause of this improvement in SAARC. The research also shows a relative fall in the real effective exchange rate, whereas the real export volumes of nations have increased drastically and share of manufacturing exports has also increased the total volume of merchandise trade. This implies an overall improvement in the export of SAARC nations. The research also suggests that by the relaxation of tariff and non-tariff barriers in these nations and by a continuous trade reform would endorse a further export growth in SAARC.

The trade reforms introduced over the years in South Asian nations have been discussed by (Panagariya, 1999), research explains the aftermath of trade liberalization in Bangladesh, India, Pakistan and Sir Lanka. The research considers the tariff and non-tariff barriers before and after trade liberalization introduced in the SAARC region. Research takes into the analysis the tariff and non-tariff barriers as proxy to account for the trade liberalization. The research shows that there is a continuous decline in non-tariff barriers in these nations. Sir Lanka has the lowest post trade liberalization non-tariff barriers followed by Pakistan and India, whereas the weighted and the un-weighted tariff have also decreased in these nations with a similar response from these nations. However, dis-aggregated analysis by product the tariff and non-tariff barriers reveals that a number of goods in these nations are bound to a high protection rate, especially agricultural goods. The research concludes that there is a huge potential in these economies

which can be utilized by similar reforms and further cooperation can lead towards an overall improvement of trade in the region.

A study conducted by (Siriwardana, 2000) presents the case of Sri Lanka's economy after trade liberalization. The examination of the reduction in the tariff and introduction of export promotion schemes, the economy has shown improvement in the export and import sector. Exports and imports increased both intra-regional as well as global. The research further explains the gains from trade liberalization using CGE modeling and implies that Sri Lanka's gain from trade can be extended further by increasing regional trade. While in the SAARC region being a major contributor in imports of Sri Lanka's economy, further strengthening of regional ties can benefit the economy in particular and the region in general.

A research on the topic of export growth in the Indian economy in the light of pre and post trade liberalization is conducted by (Dashmishra et al, 2004) the research emphasis on the pre trade liberalization regime to be a restrictive and controlled which was intended to minimize the trade deficit of the Indian economy.

With emphasis on regional integration in south Asia, a number of studies have tried to embark their emphasis on strengthening the SAARC trade. A study conducted by (Din and Nasir, 2004) also discusses the issues related to SAPTA and SAFTA. The research emphasis on the reduction of regional trade barriers. Improvement of the facilities for trade and confidence building measures' to increase the low percentage of SAARC trade.

On the contrary trade liberalization has facilitated imports and exports in the economy, despite the early balance of payment crisis faced. The economy has recovered gradually with an improvement in the balance of payment account. A long run analysis of imports, exports, and

GDP shows that these variables have a long run relationship. The policies designed to promote export growth will tend toward providing a platform for export led growth. The research by (Sharma and Panagiotidis, 2005) also reveals the same results for the Indian economy and confirms that trade liberalization has improved exports and GDP.

The examination of Bangladesh trade liberalization is conducted by (Hossian and Alluadin, 2005) which assert that the trade liberalization regime adopted by Bangladesh's economy after the initiation of the structural adjustment programs by the IMF in 1982, the economy started a transition from the regulated economy towards the open economy. This policy change included industrial, financial reforms and an emphasis on the reduction in the tariff and non-tariff barriers and steps towards an export policy shift as well as the import reforms being introduced.

These reforms have changed the pattern of real effective exchange rate, exports and imports as a ratio of GDP have increased steadily. The increase in exports is recorded to affect the manufacturing and textile sector of the economy, whereas imports also responded with a similar inclination. The long run analysis of trade liberalization and export growth reveals a positive relationship implying that in the long run trade liberalization effects have induced export growth in the Bangladeshi economy. However, this effect of export growth is only limited to the apparel and textile sector which shows a relative bias of trade reforms towards the textile manufacturing sector.

The debate on globalization and regionalism has affected nearly the whole of the world also the south Asian economies (Chowdhry, 2005) analysis the SAARC economies in terms of paving the path towards SAPTA. The research analyses Bangladesh, India, Pakistan and Sri Lanka. These four economies of SAARC have reduced average tariff rates since 1991 under the trade

liberalization regime. The effect of trade liberalization has resulted in an increase in exports of these SAARC nations. The descriptive statistics show that export performance post trade liberalization of Bangladesh has improved the most followed by India, Pakistan and Sri Lanka respectively. Similarly, the import performance of these four nations follows the same pattern of improvement. The statistics on the intra-regional trade reveals that there is a sluggish trend for the exports and import growth within the SAARC. Research concludes that intra SAARC trade should be enhanced to achieve the consolidated gains from trade.

Research conducted by the WTO for Maldives in 2006 "Diagnostic trade internationals study" reveals some important aspects of trade in the Maldives. Regarding the trade liberalization is concerned Maldives stand to be the most liberalized nation in the SAARC region, with the highest level of openness this nation leads the SAARC in terms of Openness. The import and export statistics of Maldives reveal that both merchandise exports and imports have increased over the years but current account and trade balance is observed to be in deficit. This gap between imports and exports is widening, creating a worrying situation for the country.

The experience of trade liberalization in Pakistan is detailed in a research (Husain, 2008) asserting on the figures his analysis projects that trade liberalization in Pakistan has positively affected the export growth in the economy being more open in the south Asian region it has also liberalized the agricultural sector and this policy shift has also benefited to the loss incurred in revenues by an increase in taxation.

After the trade liberalization adopted by India in 1991, the economy has responded to this regime (Bahinipati and Sahu, 2009) have analyzed the Indian economy by focusing the import and export performance and balance of trade. The export growth was observed in the Indian

economy after the implementation of trade liberalization and imports also started to increase, rather by a larger magnitude, the econometric analysis of imports and exports reveal that both these variables have a positive and significant impact on economic growth, imports contributing more than exports. Research concludes, despite the gap between merchandise exports and imports is increasing and balance of trade is in deficit, still the growth effects are more appealing for the economy.

The South Asian trade has gained a lot of importance as SAARC economies have performed well in terms of appreciating GDP growth rates, exports of this region have increased over time as the aftermath of trade liberalization adopted by these nations. This analysis is extended by (Jain and Singh, 2009) focusing the intra SAARC trade, this research compares export baskets of SAARC nations and also suggest a comparative advantage on the basis of RTA (Relative Trade Advantage) index. Revealing the intra SAARC trade trend the research emphasis that intra SAARC trade must increase for the betterment of the regional economic performance. Research also shows the contribution of SAARC in worlds' export and imports. Interestingly this trend analysis shows that the post liberalization era has shown an improvement in the export Share and Import share, but there persists a significant gap between the both, which is the major cause of current account deficits in this region. Intra-regional trade based on the RTA can favor the SAARC nations in two ways one reducing the current account deficit and specialization of the industry. However, trade integration between SAARC countries is growing at a very slow rate when compared to other RTA's of the world.

Evidence from Bangladesh economy by (Ahmad, 2010) reveals that trade liberalization during the period from 1974-1995 in Bengal's economy has shown a long run relationship between trade liberalization and real exports. The research undertakes the export supply function for

Bangladesh's economy which is dependent upon the variable like the real effective exchange rate, GDP and a dummy variable to capture the effect of trade liberalization. The time series analysis revels that the import liberalization through tariff reduction has improved the import demand and the policy shift dummy variable, shows that exports have responded positively to the trade liberalization process adopted by the economy.

The evidence of the trade liberalization has also been studied in Pakistan by (Zaman et al, 2012). The research examines the export performance from 1972 to 2010 as a time series analysis of export response function. The research uses ARDL approach to establish a long run relationship between exports and trade openness, including variables like price competitiveness, world gdp and export duties. The analysis shows that there is a significant impact of openness on the export growth in the long run which implies that liberalization policies have positively affected the aggregate export performance of Pakistan, while in the short run, there is an insignificant relationship between the both.

The impact of trade liberalization on balance of payment is a matter of concern for the developing nation as any type of trade liberalization either regional or broad can defoliate the balance of payment account of that nation, For Pakistan (Yasmin, 2012) has shown such evidence from 1970 to 2008. The long run analysis reveals that trade balance of Pakistan has not been promising over the years but study reveals that there exists a stable relationship between trade balance and GDP. However, the error correction term reveals that short run shocks may take sufficient time to adjust the trade balance. The research further suggests that export diversification and changes in tariff structure may lead to a relatively quick adjustment of the economy.

The discussion on the existing literature in SAARC region revels that this study is going to fill the gap in the existing literature. We have observed in the existing literature that export growth and import growth due to trade liberalization are majorly discussed. The effect of liberalization on the trade balance is equally important as they may in script adverse effects on the overall economic performance of the region. This research would give an insight on export growth, import growth and balance of trade.

Chapter

3

Methodology

This chapter includes three sub sections. The first section deals with the model specification. The second section comprises discussion on the data and estimation technique and the last section discusses information regarding the variable definitions.

3.1 Model Specification

This research intends to comprehend the impact of trade liberalization on exports, imports and balance of trade. These effects of trade liberalization can be accounted by estimating three models, first for exports, second for imports and third for the balance of trade. The partial equilibrium analysis of above-mentioned models would lead to grasp the impact of trade liberalization in SAARC. For this analysis, we have considered the methodology as proposed by (Paulino and Thirlwall, 2004), the inquiry is as follows.

3.1.1 The Impact of Trade Liberalization on Export Growth

Exports are viewed as a source of foreign income, its contribution in national income can change the outlook of an economy. Debates on export-led growth have added importance to the export growth in recent years. Exports are primarily dependent upon the relative price, which is the ratio of domestic and foreign country prices. The second important variable causing export demand is

the income of the foreign country. The general form of export demand function can be specified as

$$X_t = A(P_d/P_f)_t^{a_1} W_t^{a_2} \quad (1)$$

Where X_t is the export's growth level, A is a constant term, P_d represents the domestic price level whereas P_f represents the foreign price and a ratio of these prices forms the relative price for the exporting good and these prices are measured in a common currency unit. W represents the world income, and this term can also be viewed as the income of trading partner countries. The term a_1 is a representation of the price elasticity of demand for exports and a_2 is the income elasticity of the export demand and subscript t shows time for the above-mentioned variables. The log linear form for the generalized function is taken through by the log of the above equation. The export demand function can be rewritten as

$$x_t = a_1(p_d - p_f)_t + a_2(w_t) \quad (2)$$

The equation (2) is a deterministic relationship of the export growth function. This function can be viewed as a response function for export demand with relative prices and world income where $a_1 < 0$ and $a_2 > 0$. This deterministic relationship can further be transformed into the econometric form by the addition of a constant term a_0 And an error term u_t. The generalized form of export demand function assumes price and income elasticity to be constant, but it's observed that this adjustment is not instantaneous, this requires for a dynamic specification of the equation (2), we add a lag of export demand to incorporate the dynamic effect of the model. We rewrite the equation (2) as

$$x_t = a_0 + a_1(px)_t + a_2 w_t + a_3 x_{t-1} + u_t \quad (3)$$

The Equation (3) is transformed, augmented with a constant term and a stochastic error term, the above equation has also the adjustment lag of export demand x_{t-1} which incorporates the dynamic relationship in the model, and the rate of change in the relative price is now shown by px. These changes in the specification help us to determine the long run and the short run relationship of export demand function. The short run price elasticity of export demand is a_1, short run income elasticity of export demand is a_2, followed by the long run elasticities $a_1/(1 - a_3)$ And $a_2/(1 - a_3)$ respectively.

Now we introduce the measures for the trade liberalization to capture its effects on export demand, the first measure for trade liberalization is export duties, d_x which is measured as revenues from export duties as a percentage of total export value. The second measure used is a dummy variable to grasp the effect of post trade liberalization on export growth in the SAARC. The dummy used for the liberalization is denoted by (lib) and it takes a value of unity for the post liberalization years. As, this study involves a cross country analysis of SAARC nations, the equation also includes the cross sectional specification and it's incorporated by adding a subscript *i*, the equation takes form as,

$$x_{it} = a_i + a_1(px)_{it} + a_2 w_{it} + a_3 x_{it-1} + a_4 d_{xit} + a_5 lib_{it} + \varepsilon_{it} \quad (4)$$

trade liberalization can impart a number of effects, of which, the most desirable effects of such policy initiative can change the economies' price competitiveness and income. So to capture these effects imparted by trade liberalization, it can be accounted by the inclusion of interactive effects of trade liberalization. For this we have introduced two interactive terms in the equation (4).

$$x_{it} = a_i + a_1(px)_{it} + a_2 w_{it} + a_3 x_{it-1} + a_4 d_{xit} + a_5 lib_{it} + a_6(lib.px)_{it} + a_7(lib.w)_{it} + \varepsilon_{it} \quad (5)$$

After the inclusion of the interactive term our model for export demand can be restated as the equation (5). In the above equation, a_i Are the country specific effects for the panel estimation and the expected signs for the parameters are $a_1<0$, $a_2>0$, $a_3>0$,$a_4 < 0$ $a_5 > 0$ $a_7>0$, whereas the sign for a_6 is ambiguous as it can take either positive or negative values. This ambiguity is due to the change in the relative price structure of the economy. If the relative price level in an economy increases as trade liberalization occurs then it will take a negative sign and vice versa.

3.1.2 The Impact of Trade Liberalization on Import Growth

After the explanation of the export growth model, we now move on to explain the import growth model. Imports function can take a gernalized form as shown in equation 6. This function shows that relative prices and domestic income affect the import demand in the economy.

$$M_t = k(P_d / P_f)_t^{b_1} Y_t^{b_2} \quad (6)$$

Where $M_t$the import performance level, k is a constant term, P_f represents the foreign price and P_d represents the domestic price. This relative price is measured in common currency units. Y is the domestic income growth. The domestic income is accounted into the import demand function because of the datum, that rise in domestic income under trade liberalization may give a rise to import demand. The term b_1 is a representation of the price elasticity of demand for imports and b_2 is the income elasticity of the import demand. The log linear of the generalized form gives a log linear Import demand function as follows.

$$m_t = b_1(p_d - p_f)_t + b_2(y_t) \quad (7)$$

The equation (7) is a deterministic relationship for the import demand. $b_1$takes a negative value and b_2 takes a positive value. This function can be viewed as a responsive function for import demand with relative prices and domestic income. This deterministic relationship can further be transformed into the econometric form by the addition of a constant term b_0 and the error termθ_t. For the dynamic specification lag value of the dependent variable is introduced, giving us the following equation.

$$m_t = b_0 + b_1(px)_t + b_2 y_t + a_3 m_{t-1} + \theta_t \quad (8)$$

The equation (8) is transformed, augmented with a constant term and a stochastic error term, the above equation has also the adjustment lag of import demand m_{t-1} which incorporates the dynamic relationship in the model, and the rate of change in the relative price is now shown by pm. The short run price elasticity of import demand is b_1. and the short run income elasticity is b_2 followed by the long run elasticities $b_1/(1-b_3)$ And $b_2/(1-b_3)$ respectively.

Now we introduce the measures for the trade liberalization to capture its effects on import demand, the first measure for trade liberalization is import duties d_m and the second measure used is the liberalization dummy or policy shift dummy, denoted by (lib). As, this study involves SAARC nations, so the equation also includes the cross section sectional specification and it's incorporated by adding a subscript *i*. The equation takes form as,

$$m_{it} = b_i + b_1(px)_{it} + b_2 y_{it} + b_3 m_{it-1} + b_4 d_{mit} + b_5 lib_{it} + \theta_{it} \quad (9)$$

To capture the effects of trade liberalization on changes in the economies' price competitiveness and domestic income, we adopted the inclusion of interactive effects of trade liberalization. For this we have introduced two interactive terms in the equation (9), we get the following equation.

$$m_{it} = b_i + b_1 pm_{it} + b_2 y_{it} + b_3 m_{it-1} + b_4 d_{mit} + b_5 lib_{it} + b_6 (lib.pm)_{it} + b_7 (lib.y)_{it} + \theta_{it} \quad (10)$$

The above equation illustrates b_i as the country specific effects for the panel estimation and the expected signs for the parameters are b_1<0, b_2>0, b_3>0,$b_4 < 0$, $b_5 > 0$ b_7>0, whereas the sign for b_6 is ambiguous as it can take either positive or negative values. This ambiguity is due to the change in the relative price structure of the economy. If the relative price level in an economy increases as trade liberalization occurs then it will take a negative sign and vice versa. pm is the price of imports, y is the domestic income, m_{it-1} is the lag of import demand, d_m is duty on imports, lib is the trade liberalization dummy, followed by the interaction terms of trade liberalization effects on import prices and income respectively.

3.1.3 The Impact of Trade Liberalization on Balance of Trade

Trade liberalization can affect balance of trade in two possible ways, first is an improvement in the balance of trade as an aftermath of the liberalization and the second is the deterioration of the balance of trade account. Balance of trade is measured in monetary terms to find out the nominal gap between imports and exports, which is an illustration of deficit or surplus of foreign exchange in the SAARC region. This approach is also helpful to evaluate easily the extent of deterioration/improvement occurred in the midst of trade liberalization. This approach is also supported by studies conducted by (Paulion, 2001) and (Paulino, Thrilwal, 2004).

To account for the changes in the trade balance, we need to consider that SAARC nations have dissimilarities regarding size of the economy which can affect the trade balance of an economy. So, in order to answer these differences and account all countries at par, the trade balance is divided by gdp shown as tb/gdp. Explanatory variables include a lag of trade balance as a proportion of GDP $(tb/gdp)_{it-1}$, w_{it} is the growth of income of the trading partners, y_{it} is the domestic income. As a result of an increase in the domestic income, imports tend to increase, this leads to worsen the trade balance. As foreign income increases it tends to increase the exports of its trading partners. Duties on exports and imports are respectively added as explanatory variables d_x, d_m The nominal terms of trade TOT_{it} is also added as an explanatory variable because changes in terms of trade directly effects the balance of trade independent of liberalization and an interaction term is also introduced comprising the trade liberalization dummy lib and domestic income. This interaction terms establishes a relationship which explains that with a rise in the domestic income due to trade liberalization would also have its effects on the trade balance.

The model for balance of trade can be represented by the following equation.

$$(tb/gdp)_{it} = c_1 + c_2(tb/gdp)_{it-1} + c_3 w_{it} + c_4 y_{it} + c_5 d_{xit} + c_6 d_{mit} + c_7 TOT_{it} + c_8(lib.y)_{it} + c_9 p + \Omega_{it} \quad (11)$$

The expected sign of the above parameters are expected to be $c_2 > 0$, $c_3 > 0$, $c_4 < 0$, $c_5 < 0$, $c_6 > 0$, $c_7 > 0$. As c_9 is the rate of change of relative price or real exchange rate, the sign of this coefficient depends on the substitution effect. If there is a substitution of foreign for domestic products, then this will take a negative sign. c_8 can take any sign, the negative sign indicates that

trade liberalization has raised the growth of income, hence worsening the trade balance or vice versa.

After the explaining the models for imports growth, export growth and trade balance. We now move forward to the next section which comprises discussion on Data and Estimation technique.

3.2 Data, Estimation Technique and Variable Definitions

In the previous section, we have developed our models for export growth, import growth and balance of trade. This section gives a description of data, estimation technique and variable definitions for the above-mentioned models. This section includes three subsections, the first section relates to data description and sources of the data, the second section discusses the estimation technique and the last section defines the variables for this research.

3.2.1 Data

This research is based on the panel data analysis of SAARC nations. The data comprises of six cross sections or countries' namely Bangladesh, Bhutan, India, Nepal, Pakistan and Sir Lanka the time period for this analysis is taken from 1982 to 2012. This time period is selected because of a particular reason, as in this time period SAARC nations started to opt trade liberalization reforms and with the passage of time some serious efforts were made, especially in the 1990's, when SAARC nations started to decrease the tariff and non-tariff barriers in the region.

Data are taken on the annual basis for each variable in the cross section. The data for exports, imports, export duties, import duties, domestic and foreign income are taken from world development indicators (WDI) the latest issue. These data are taken at constant 2000 US dollars. The liberalization dummy is used to grasp the post liberalization effects on export growth, import

growth and balance of trade. The data on the relative price in common currency is taken from international financial statistics (IFS) latest issue. The world tariff profile is also used to compare tariffs reforms in the region over time. The data on export duties for Pakistan are collected by the federal board of revenue annual reports.

The Panel data for this research has a greater number of time series observations, as data ranges from 1982 to 2012 for each SAARC nations. Due to the greater number of time series observations. It is important to check for the stationarity of the data. To check the stationarity of the data, we have employed two types of tests, which assumes the common unit root process and individual unit root process and results are shown in table 3.1.

Table 3.1 Results for Panel Unit Root Test

Variables	TEST	Level of Integration
Imports	IM, Pesaran and Shin**	I(1)
	ADF-Fisher*	I(1)
	PP- FISHER*	I(1)
	Levin,LIN & Chu t*	I(1)
Exports	IM, Pesaran and Shin**	I(1)
	ADF-Fisher*	I(1)
	PP- Fisher*	I(1)
	Levin,LIN & Chu t*	I(1)

Variables	TEST	Level of Integration
Domestic income	IM, Pesaran and Shin**	I(1)
	ADF-Fisher*	I(1)
	PP- Fisher*	I(1)
	Levin,LIN & Chu t*	I(1)
Income of trading partners	IM, Pesaran and Shin**	I(1)
	ADF-Fisher*	I(1)
	PP- Fisher*	I(1)
	Levin,LIN & Chu t*	I(1)
Relative Prices	IM, Pesaran and Shin**	I(1)
	ADF-Fisher*	I(1)
	PP- FISHER*	I(1)
	Levin,LIN & Chu t*	I(1)
Trade balance	IM, Pesaran and Shin**	I(1)
	ADF-Fisher*	I(1)
	PP- Fisher*	I(1)
	Levin,LIN & Chu t*	I(1)
Terms of Trade	IM, Pesaran and Shin**	I(1)
	ADF-Fisher*	I(1)
	PP- Fisher*	I(1)
	Levin,LIN & Chu t*	I(1)

Variables	TEST	Level of Integration
Import duties	IM, Pesaran and Shin**	I(1)
	ADF-Fisher*	I(1)
	PP- Fisher*	I(1)
	Levin,LIN & Chu t*	I(1)
Export duties	IM, Pesaran and Shin**	I(1)
	ADF-Fisher*	I(1)
	PP- Fisher*	I(1)
	Levin,LIN & Chu t*	I(1)

* Null: Unit root (assumes common unit root process)

**Null: Unit root (assumes individual unit root process)

The tests selected to check individual unit root process are IM, Pesaran and Shin test which assumes an individual unit root process. Whereas, the ADF-Fisher, PP- FISHER, and Levin, LIN & Chu assume the common unit root process.

The above table shows that the variables in this research are non-stationary at level. But all variables are stationary at the first difference. This inference leads us to redefine our model as the above specification would not give us appropriate results. The second issue regarding the above-mentioned models is the problem of endogenity, arising due to the dynamic specification of the model. We now move on to discuss the issue of endogenity in the following section.

3.2.2 Estimation Technique

Equation (5), (10) and (11) will be estimated separately as this specification allows distinguishing between short run and the long run elasticity of price and income in a partial

equilibrium analysis. This specification also allows the individual causation of price, income and trade liberalization on export growth, import growth and balance of trade.

Using the panel data for the SAARC nations, the estimation procedure follows the generalized method of moments (GMM). The rational for using this technique involves the dynamic nature of these equations as the lagged value of the dependent variable is introduced to the right hand side of the equation as a regressor. Let us consider the equation (5)

$$x_{it} = a_i + a_1(px)_{it} + a_2 w_{it} + a_3 x_{it-1} + a_4 d_{xit} + a_5 lib_{it} + a_6(lib.px)_{it} + a_7(lib.w)_{it} + \varepsilon_{it}$$

Where as $\varepsilon_{it} = u_i + v_{it}$ (12)

now we consider the fixed effect model, u_i are assumed to be fixed parameters and v_{it} is the random term which is independently and identically distributed with a zero mean and constant variance this implies v_{it} is IID $(0,\sigma_v^2)$. By the substitution of the equation (12) in the Equation (5) we obtain

$$x_{it} = a_i + a_1(px)_{it} + a_2 w_{it} + a_3 x_{it-1} + a_4 d_{xit} + a_5 lib_{it} + a_6(lib.px)_{it} + a_7(lib.w)_{it} + u_i + v_{it} \quad (13)$$

This can be observed that x_{it} is dependent upon u_i and this also implies that $x_{it-1}$is also dependent upon u_i this can be shown by taking a one time period lag of the equation (13).

$$x_{it-1} = a_i + a_1(px)_{it-1} + a_2 w_{it-1} + a_3 x_{it-2} + a_4 d_{xit-1} + a_5 lib_{it-1} + a_6(lib.px)_{it-1} + a_7(lib.w)_{it-1} + u_i + v_{it-1} \quad (14)$$

In this condition endogeneity exists as Cov($u_i, x_{it-1} \neq 0$). The least square dummy variable technique for the estimation of fixed effect model fails to produce unbiased and consistent estimates.

Now we consider for the random effect model which assumes that both u_i & v_{it} are random and independent and identically distributed that is v_{it}IID (0,σ_v^2) and u_i is IID (0,σ_u^2) with this assumption this technique follows the standard assumption of no covariance between errors and explanatory variables.

Let's consider the equation (14) we observe that x_{it-2} is correlated with v_{it-1} for a formal presentation. We transform our model by subtracting (13) from, (14) we get a transformed equation.

$$\Delta x_{it} = a_1\Delta(px)_{it} + a_2\Delta w_{it} + a_3\Delta x_{it-1} + a_4\Delta d_{xit} + a_5\Delta lib_{it} + a_6\Delta(lib.px)_{it} + a_7\Delta(lib.w)_{it} + \Delta v_{it}$$

Or

$$\Delta x_{it} = a_1\Delta(px)_{it} + a_2\Delta w_{it} + a_3(x_{it-1} - x_{it-2}) + a_4\Delta d_{xit} + a_5\Delta lib_{it} + a_6\Delta(lib.px)_{it} + a_7\Delta(lib.w)_{it} + (v_{it} - v_{it-1}) \quad (15)$$

By comparing equation (14) and (15) this is observed that there is a correlation between x_{it-2} and v_{it-1} and similarly x_{it-1} is correlated with v_{it}. In the presence of such Correlation endogenity still remains in the model and estimates of GLS for random effect models are inconsistent and biased.

To address the above stated issues we have adopted the technique proposed by (Arellano and Bond, 1991). By the above transformation the following three equations are estimated using dynamic GMM. The instruments used for the estimation are the lagged values of explanatory variables. The equation for export growth, import growth and trade balance are as follows.

$$\Delta x_{it} = a_1\Delta(px)_{it} + a_2\Delta w_{it} + a_3\Delta x_{it-1} + a_4\Delta d_{xit} + a_5\Delta lib_{it} + a_6\Delta(lib.px)_{it} + a_7\Delta(lib.w)_{it}$$

$$+\Delta v_{it} \quad (15)$$

$$\Delta m_{it} = b_1\Delta pm_{it} + b_2\Delta y_{it} + b_3\Delta m_{it-1} + b_4\Delta d_{mit} + b_5\Delta lib_{it} + b_6\Delta(lib.pm)_{it} + b_7\Delta(lib.y)_{it}$$

$$+\Delta\theta_{it} \quad (16)$$

$$\Delta(tb/gdp)_{it} = c_2\Delta(tb/gdp)_{it-1} + c_3\Delta w_{it} + c_4\Delta y_{it} + c_5\Delta d_{xit} + c_6\Delta d_{mit} + c_7\Delta TOT_{it} +$$

$$c_8\Delta(lib.y)_{it} + \Delta\Omega_{it} \quad (17)$$

The above-mentioned equations are dynamic and the problem of endogenity has been removed. Now we are reconsidering table 3.1 as variables are stationary at the first difference. Does the above mentioned transformation would also cater to the problems arising due to non- stationarity at level?. The above model specification is dynamic and equations are taken in the first difference form. Recent literature on non-stationarity of Panel data suggests that, the first difference dynamic panel models using the GMM estimator is persistent even when the series are non-stationary (Hayakawa, Nagata, 2012). Another research in the field conducted by (Bun, Sarafidis, 2013) shows that when the series in a dynamic panel estimation are non-stationary, bias in system GMM is relatively large as compared with the first difference panel data model as in the case of non-stationary in panel heterogeneity is only removed by using first differences. Another research by (Bun, Windmeijer, 2007) shows that in the dynamic panel data system GMM has a weak instrument problem and bias is relatively higher than the first difference GMM.

By the above discussion, we can use the first difference GMM estimation procedure to estimate the above-mentioned equations 15, 16 and 17. As our equation specification is in the first

difference, so we can apply the dynamic generalized method of moment with lagged variables as instruments, to find the impact of trade liberalization on export growth, import growth and balance of Trade, respectively.

The following section comprises on the definition of the variables for research and inquiry is as follows.

3.2.3 Variables Definitions

3.2.3.1 Imports (m)

Imports are defined as "imports of all goods and services, representing the value of all goods and other market services received from the rest of the world". Data are taken in constant 2000 U.S. dollars.

3.2.3.2 Exports (x)

Exports are defined as "exports of all goods and services, representing the value of all goods and other market services provided to the rest of the world. Data are in constant 2000 U.S. dollars.

3.2.3.3 Exports Duties (d_x)

Export duties are defined as "taxes on exports, all levies on goods being transported out of the country or services being delivered to nonresidents by residents". Data are in constant 2000 U.S. dollars. Data for Pakistan are taken from the CBR annual book published by the federal board of revenue and for the other SAARC nations data is taken from world development indicators.

3.2.3.4 Import Duties (d_m)

Import duties are defines as "customs and other import duties are all levies collected on goods that are entering the country or services delivered by nonresidents to residents". Data are in constant 2000 U.S. dollars.

3.2.3.5 Domestic Income (y)

Domestic income is defined as gdp at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2000 U.S. dollars.

3.2.3.6 World Income (w)

World income is defined as the gdp of the trading partners of SAARC nations. This variable is defined as on the basis, that the SAARC nations only contribute 6 percent of the world's total GDP, by subtracting SAARC income from world income may give biased results. This problem has been addressed in research by taking the income of major trading partners of the SAARC nations as a Proxy of world income. This variable includes the GDP of the USA, UK, UAE, France, Saudi Arabia, Singapore, China and Russia.

3.2.3.7 Relative Prices (p_x, p_m and p)

Relative Prices are defined as domestic price ratio to foreign price accounted in a common currency, this definition can be redefined as real exchange rate and $RER = (E.\frac{p_d}{p_f})$, where E is the exchange rate defined as domestic currency units per each foreign currency unit. The relative price change for exports, imports and trade balance is measured as the real exchange rate and this variable is sourced from international financial statistics (IFS).

3.2.3.8 Trade Liberalization Dummy (lib)

We have used the trade liberalization dummy for the SAARC nations as a policy shift dummy variable. As SAARC has adopted liberalization in 1990's and extended the trade relationship in the region by adopting the RTA (Regional Trade Agreement) known as SAPTA (SAARC Preferential Trading agreement) in 1991 under the SAARC arrangement for the enhancement of domestic trade relationship. A study by (Sach and Warner, 1995) on trade openness measures also suggests that Pakistan, India and Sri Lanka have liberalized economies in 1991. On the basis of the above-mentioned criterions, we have selected 1991 as the year of trade liberalization in SAARC. The trade freedom Index published by heritage foundation and the world trade profile by WTO and UNCTAD have also evidenced that during 1990's the tariff and non-tariff barriers in the region have declined.

3.2.3.8 Trade Balance (tb)

Trade balance is defined as the difference of export and imports. Trade balance is taken in account as a monetary measure, showing the gap between the value of exports and imports of goods.

3.2.3.9 Terms of Trade (tot)

The terms of trade is defined as the ratio of the price of export with respect to the price of import. This is also known in literature as pure terms of trade.

The source of the variable definitions is world development indicator various issues and international financial Statistics latest issue.

Chapter

4

Results and Discussion

This chapter includes the summary of the results obtained by the GMM estimation of export growth, import growth and trade balance models as proposed in the last section of the previous chapter. This chapter is divided into four sections. The first section comprises on the results and discussion on the export growth model. The second section discusses the results on import growth. The third section compares the export and import model in the context of Trade liberalization effects and the fourth section discusses the trade balance model.

4.1 Impact of Trade liberalization on Export Growth of SAARC

Results obtained for the export growth model are reported in Table 4.1. The table reports the value of the coefficients of explanatory variables, followed by the respective t-stats and probability values. This organization is helpful in understanding the significance level of the individual explanatory variables. The table also includes estimates for the long run price and long run Income elasticity.

The results for the export growth are depicted as follows.

Table 4.1 Impact of Trade Liberalization on Export Growth in SAARC

Dependent Variable (Export growth x_{it})

Explanatory Variables	Coefficient	T-stats	P values
Relative price $(px)_{it}$	-0.161	-2.457	0.0471
Lagged export growth (x_{it-1})	0.083	2.876	0.0054
Income growth Trading partners (w_{it})	1.954	2.463	0.0000
Export Duties (d_{xit})	-0.112	-1.8867	0.0612
Shift Dummy (lib_{it})	0.957	2.9784	0.0001
Interaction Dummy $(lib.w)_{it}$	0.416	3.6374	0.0004
Interaction Dummy $(lib.px)_{it}$	-0.043	-2.749	0.0000
Long run Income elasticity	2.130		
Long run Price elasticity	-0.175		
R^2	0.81		
J -stats	3.356		0.339
Instrument rank	11		

The effect of relative price change on export growth takes a negative sign, this confirms the theoretical relationship between export growth and price, as price of the exportable increases their demand is reduced as proposed by (Mundell, 1960). The estimation results show that a one

percent increase in the price level of SAARC nations is going to decrease the export growth by 0.16 percent. Moreover, as relative prices are accounted in common currency, this also asserts that an appreciation of domestic currency will negatively affect the export growth of these economies. The value of t stat shows that relative prices affect export growth significantly and this coefficient is significant at a 1-percent level of significance.

The lagged value of export growth takes a positive value and a magnitude of 0.083 this shows that the effect of lagged export growth diminishes over time. From this value we can assert that there exists a dynamically stable relationship between the dependent and independent variable. A research conducted by (Khan, 1974), supports the results of this research in the case of south Asian nations. The estimation results of (khan, 1974), shows that lagged export for south Asia takes a positive value and with a magnitude of 0.023.

Exports as a function of the income growth of trading partners' shows a positive relationship, affirming the indication of a rise in export growth as income of trading partners increases. This model shows that a percentage rise in income growth of trading partners increases export growth by 1.95-percent. (Khan et al, 2013) observes a similar relationship between export demand and foreign income for Pakistan. They have found that a one percent rise in foreign income growth induces Pakistani exports by 1.281 percent. Important information enfolded in this value is that, a change in income growth of trading partner affects export growth in the SAARC region elastically.

The result of export duties shows a negative relationship with export growth as expected. This negative sign shows a decline in export growth as export duties are increased. The coefficient of the export duties is -0.11. The coefficient's value is significant at a 10-percent level of

significance. Under the trade liberalization regimes, export duties are used as a tool. The reduction in the export duties tends to increase export growth.

We observe that the value of this coefficient is relatively small. This explains that a reduction in the export duties contributes relatively low to export growth. (Joshi and Little, 1996) have discussed the impact of the export duty reduction in the Indian economy. The research shows that a reduction in export duties as a result of trade liberalization has increased exports by at least 3 percent. Another research conducted by (Dornbush, 1992) shows that a decline in the export duties in Turkey has resulted in an average per year increase in export growth of 1.92 percent.

The dummy variable used in the equation for export growth enters as a shift variable for grasping the effect of post liberalization in SAARC nations. This shift dummy takes a value of 0.957 and is significant at a 1-percent level of significance. The coefficient's value enfolds important information regarding the policy shift towards broad liberalization. The value of this explanatory variable show that trade liberalization has a positive effect on export growth. And trade liberalization has contributed approximately 1 percent to the export growth. Previous studies in the field show that liberalization has improved export performance (Bleaney, 1999). In case of Latin American nations, (Bleaney, 1999) has found an increase of 1.52 percent in export growth, as an aftermath of trade liberalization. Research by (Ahmed, 2000) also supports the finding that liberalization has increased export growth in Bangladesh.

The above discussed explanatory variables, export duties and liberalization dummy give a comparison of decline in export duties and trade liberalization regime, interestingly we observe here that a decline in export duties by 1 percent would only contribute 0.11 percent to export growth. Whereas, the effects of trade liberalization are contributing higher to the export growth.

This information implies that a better policy tool for achieving higher export growth would be trade liberalization, when compared with the reduction in export duties.

The interaction term in the export growth model with respect to changes in the income of trading partner takes a positive value. This term captures the effect of trade liberalization on the income elasticity of exports. It is observed that, due to the trade liberalization effects on income of trading partners, export growth has increased by 0.416 percent.

Observing the interaction term with respect to price, the interactive dummy with respect to price takes a negative value. This shows that a higher price of exportable post liberalization would impact export growth negatively. This interaction dummy can also be interpreted as the effect of trade liberalization on the price elasticity of exports. Results for both the interaction terms are consistent with research conducted by (Paulino and Thrilwall, 2004) for developing nations.

One can observe by the analysis of the two interactive dummies, the effects of trade liberalization on the income elasticity of exports is higher than the effects of trade liberalization on the price elasticity of exports. This implies that the income effect of trade liberalization is stronger than the price effect.

The long run elasticity calculated from the export growth is also reported in Table 4.1. The long run income elasticity for export growth is recorded as 2.13 and the long run price elasticity takes a value of -0.175. This shows that the income elasticity of export growth is more elastic as compared to the price elasticity. Research conducted by (Montenegro and Senhadji, 1999) show that the long run income elasticity for the Asian region takes a value of approximately 1.5, and the price elasticity takes a value of -0.312. Another study conducted by (Perraton, 2003) show that the long run income elasticity of export demand in South Asia is approximately 2.34.

However, a study by (Ju, Wu and Zeng, 2009) shows a relatively low value for the long run income elasticity.

The diagnostic statistics for the model includes the value of R^2 and J- stats. The R^2 shows the overall fit of the model and it takes a value of 0.81. Whereas, the J-stat uses the value of GMM objective function under over identified moment conditions. The null hypothesis states that model is correctly specified and instruments are valid. A rejection of the null hypothesis implies that the instruments are not valid or instruments violate the orthogonality condition for GMM estimation (F.Baum et al, 2003).

The J-stat takes a value of 3.356 and a P value of chi square shows the acceptance of the null hypothesis with an instrument rank of 11. This implies that instruments are valid and satisfying the orthogonality condition.

The results of the export growth model are discussed above, the next section of this chapter follows a discussion on the import growth model, and the results obtained for the import growth model are discussed in table 4.2 in the next section.

4.2 Impact of Trade Liberalization on Import growth of SAARC

In this section, we examine the results obtained for import growth in SAARC nations. The skeptics of trade liberalization argue that as developing nations have adopted trade liberalization, growth of the importable increases comparatively more than exportable resulting in the deterioration of the balance of trade (Paulino, 2001). This model would help us to find out the difference between export growth and import growth as the aftermath of Trade liberalization in the SAARC region.

Table 4.2 Impact of Trade Liberalization on Import Growth in SAARC

Dependent Variable (Import growth m_{it})

Explanatory Variables	Co efficient	T-stats	P values
Relative price $(pm)_{it}$	-0.15	-3.063	0.0000
Lagged Import growth (m_{it-1})	0.64	1.9276	0.0602
Domestic Income growth (y_{it})	1.102	3.643	0.0000
Import Duties (d_{mit})	-0.315	-4.063	0.0006
Shift Dummy (lib_{it})	2.021	1.992	0.0530
Interaction Dummy $(lib.y)_{it}$	0.782	2.541	0.0121
Interaction Dummy $(lib.pm)_{it}$	-0.605	-1.8742	0.0642
Long run Income elasticity	2.1722		
Long run Price elasticity	-0.4166		
R^2	0.87		
J -stats	6.625		0.3562
Instrument rank	13		

The relative price change takes a negative sign. This shows that if prices of importable increases, it is going to affect import growth negatively. A percentage point increase in relative prices is going to decrease the import growth by 0.15 percent. These results are in aligning with economic theory as suggested by (Mundell, 1960). The coefficient of relative price change is significant at a 1-percent level of significance. The relative price change is taken in common currency. An appreciation of foreign currency would also affect import growth negatively.

The lagged value of dependent variable takes a positive value. This shows that there is a dependence of current import growth on its lagged value. However, the value is a fraction 0.64 this shows that the effect of lagged import growth diminishes over time, avowing that the relationship between the current and lagged value of export growth possess a dynamically stable relationship. Lagged import growth is significant at a 10-percent level of significance. A study conducted on import and export demand in developing countries by (Khan, 1974) confirms this relationship for south Asia.

Import growth is a function of domestic income growth, as domestic income increases the demand for importable increases, contributing to import growth. In case of SAARC we observe a similar relationship between domestic income and import growth. The positive sign confirms this relationship. The coefficient of domestic income growth takes a value approximately 1.1. The value and sign of this coefficient is acknowledged by the economic theory and explains that the growth of domestic income is going to contribute to import growth. Value of domestic income attributes that a rise in the income of SAARC nations increases import demand elastically. This research also takes into liberalization measures of import duties and a shift dummy.

We now discuss the effects of import duties on the import growth in the SAARC region. Estimates show that there exist a negative relationship between the import growth and import duties. This negativity encloses that as the import duties are being levied by the SAARC nations the import growth is affected negatively. Import duties are widely used to restrict imports, as a policy tool import duties are considered effective to control import flows in the economy, in case of the SAARC region, these import duties have decreased over time (Siriwardana, 2000). This research observes that one percent decline in import duties contributes to the import growth by 0.31 percent. The value of this coefficient is significant at a 1-percent level of significance. In a research conducted by (Dornbush, 1992) the decline in import duties has contributed to the import growth of Mexico by 1.4 percent.

After the discussion on the import duties, we now take the trade liberalization variable or shift dummy variable to check the impact of trade liberalization on import growth. The trade liberalization adopted by the SAARC nations in 1990's, is accounted using a dummy variable. The results show that there exists a strong positive and a liable relationship between trade liberalization and import growth. The research by (Hickok, 1993) shows that in a sample of 23 developing nations, demand for imports has risen by an average of 1.9 percent due to trade liberalization. Whereas, shift dummy variable takes a value of 2.02 this shows that trade liberalization adopted by the SAARC nations has increased import growth significantly.

We observe here that the shift in the policy regime has contributed more to import growth as compared with the reduction in import duties. We can conclude that in case of SAARC nations the trade liberalization has established to be a more effective tool for enhancing import growth.

After the discussion on the trade liberalization dummy, we consider the effect of trade liberalization on the domestic income and price. The effects of trade liberalization on domestic income and prices are incorporated using interactive dummies. We first consider the interactive dummy with respect to domestic income. The interaction dummy reveals that the effect of trade liberalization on the income elasticity of imports is positive and significant.

The interactive dummy with respect to relative price change takes a negative value. This shows that the effect of trade liberalization on the price elasticity of imports is negative. So this asserts that a change in relative price post liberalization is going to affect import growth negatively. The results obtained from the above-cited interaction terms are consistent with the study of (Lopez, 2005) for developing nations.

The long run price and income elasticity for the import growth function are reported in table 4.2. The long run income elasticity of the import growth takes a value of 2.172 this shows that there exists an elastic relationship among the long run import growth and income. The value obtained for the long run price elasticity takes a value of -0.46. This shows that, import growth in the long run is affected negatively by relative prices and this relationship is relatively less elastic. The results obtained by this research are persistent with by (Perraton, 2003) and (Senhadji, 1978).

By comparing the long run income and the long run price elasticity of import growth. We infer that income effect in the long run is higher than the price effect. The similar phenomenon is observed in the case of export growth. So we can conclude that the income effect is higher than the price effect in the long run.

The diagnostic of the model includes two measures R^2 and J-stats. The overall fitting of the model is measured by the R^2 and it takes a value of 0.87 or 87%. The rank of instruments is 13 and J-stats show that instruments are valid and efficient.

4.3 Comparing the effects of trade liberalization on Export and Import Growth

After interpreting the results obtained from export and import growth models. We now compare the effects of trade liberalization on exports growth and import growth. This comparison of the two models would be helpful in understanding the individual effect of trade liberalization on imports and exports. From table 4.3 we observe that the effect of duties on import growth exceeds the effect of duties on export growth. This implies that if there is a simultaneous decrease in export and import duties in SAARC, this would contribute in export and import growth, but import growth would be larger than export growth.

The effect of liberalization on export growth and import growth is measured by a dummy variable, our results show that trade liberalization in the SAARC region has increased export growth by 0.95 percent and import growth by 2.02-percent from these results we can infer that trade liberalization has increased imports as well as exports, but a thing to notice is that this policy has produced more favorable effects in import growth.

The effect of trade liberalization on the income elasticity of export and import is calculated by the interaction terms in the model. The income elasticity of export and import takes a positive sign and the values of 0.416 and 0.782 respectively.

Table 4.3 Comparison of the Effects of Trade Liberalization on Exports and Import growth

Effects of Trade Liberalization measures on Import and Export growth	Coefficient
Effect of duties on Export growth	-0.112
Effect of duties on Import growth	-0.315
Effect of liberalization on Export growth	0.957
Effect of liberalization on Import growth	2.021
Effect of Liberalization on Income elasticity of Exports	0.416
Effect of Liberalization on Income elasticity of Imports	0.782
Effect of Liberalization on Price elasticity of Exports	-0.043
Effect of Liberalization on Price elasticity of Imports	-0.605

We observe that the income elasticity of exports is lower than the income elasticity of imports. This reveals that an increase of one percent of the income of the trading partners would increase exports of the SAARC region by 0.416. On the other hand, if the income of SAARC nations increases by the similar amount, import growth would increase by 0.78 percent. This comparison shows that in the SAARC region, there is more inclination towards importing goods as income rises.

The effect of liberalization on price elasticity is accorded using interactive dummies. We observe from the export growth and import growth models that, price elasticity of exports is -0.043 and price elasticity of imports is -0.605. This shows that SAARC region is more price sensitive regarding imports as compared to the trading partners of the SAARC region.

From the above discussion, we can draw an inference that trade liberalization may have worsened the trade balance in the SAARC region, to spell out this we consider the trade balance model in the following section.

4.4 Impact of Trade Liberalization on Trade Balance of SAARC

The first two sections of this chapter discussed export growth and import growth respectively. A comparison of trade liberalization effects on export growth and import growth are also being discussed in the previous section. The previous section reveals the possibility of worsening of the trade balance in the SAARC region.

To capture the impact of trade liberalization on the balance of trade. We have modeled both, the domestic income growth and growth of trading partner's income. Duties on exports and imports are considered, as duties are used as a policy tool to regulate trade. Liberalization dummy, terms of trade and interactive dummy with respect to the change in domestic income are also included in this model. Trade balance is the dependent variable, and it is divided by the GDP of each SAARC member, to take into account the difference in size of the economy. GMM estimates for the trade balance are reported in table 4.4.

The effect of the relative price change on trade balance takes a negative sign which shows that an increase in relative price worsens trade balance, but we observe that the value of this coefficient is low and insignificant.

Table 4.4 Impact of Trade Liberalization on Trade balance in SAARC

Dependent Variable (Trade balance/gdp $(tb/gdp)_{it}$)

Explanatory Variables	Co efficient	t-stats	P values
Relative price change p_{it}	-0.003	-1.338	0.148
Lagged trade balance $(tb/gdp)_{it-1}$	0.863	2.5243	0.0000
Income growth of trading partners w_{it}	0.782	6.643	0.0000
Domestic Income growth y_{it}	-0.27	-7.043	0.0000
Import Duties d_{mit}	0.934	5.262	0.0000
Export Duties d_{xit}	-0.621	-6.471	0.0000
Shift dummy $(lib)_{it}$	-2.615	-1.7940	0.0782
Terms of Trade TOT_{it}	0.632	5.697	0.0000
Interaction Dummy $(tfi.y)_{it}$	-0.58	1.6922	0.0841
R^2	0.91		
J-stat	6.27		0.445
Instrument rank	12		

The lagged value of trade balance as a ratio of GDP takes a positive value. This shows that the trade balance is affected by its previous value with a magnitude of 0.863. The value of this coefficient is a fraction. The lagged variable effect diminishes over time. In case of trade balance, the effect of lagged variable is stronger than observed in import growth and export growth models. The coefficient value suggests that dynamically this relationship is stable.

The income growth of the trading partner has a positive effect on trade balance in the SAARC region. A one percentage point increase in the income of trading partner improves the trade balance of SAARC nations by approximately 0.8 percent.

The domestic income growth takes a negative sign as expected. This negative sign shows that if domestic income tends to rise in the SAARC region, a portion of this income is spent on importing goods which worsens the trade balance. The coefficient takes a value of -0.27 this explains that arise in 10 percent domestic income in SAARC nations is going to worsen the trade balance by 2.7 percent. This relationship is significant at a 1-percent level of significance.

The results for lagged trade balance over GDP, growth of income of trading partner and domestic income growth are in aligning with research conducted by (M.Ghani, 2011), with the same sign but the magnitude of domestic income between researches vary. Another research conducted by (Paulino, 2001) on trade liberalization and balance of payments on 22 developing nations supports the results of this research.

After the discussion on domestic income and income of trading partners effecting trade balance now we move on to interpret the results on import duties and export duties. The import duties in SAARC nations show a positive relationship with trade balance, this emphasis that as import restrictions increase this tends to improve the trade balance of SAARC nations. An increase in

import duties by 1 percent tends to improve the trade balance by 0.943 percent; similarly a 1-percent reduction in these duties is going to worsen off the trade balance of SAARC nations. The value of this coefficient is significant at a 1-percent level of significance.

The export duties affect trade balance negatively as a rise in the export duties tends to decrease the exports of SAARC nations which in turns start to deteriorate the trade balance in the region. The coefficient takes a value of -0.62 which implies an average 10- percent increase in the export duties worsens the trade balance by 6.2 percent. This can also be viewed as a reduction in the export duties would improve the trade balance in SAARC.

Comparing the effect of the export and import duties on balance of trade in the SAARC region. It is observed that the effect of the reduction of the import duties is greater than the effect of the reduction in the export duties by approximately 0.323 percent. By this we can assert that in the SAARC region reduction of the import duties has worsened trade balance more than the improvement caused due to the reduction of the export duties.

The results obtained by this research on the export duties, the import duties are also being supported by research conducted by (Lopez and Thrilwall, 2005).

The trade liberalization dummy variable captures the effect of the liberalization regime on balance of trade in the SAARC region. The dummy takes a negative sign, this implies that trade liberalization has worsen off the balance of trade in the region by 2.6 percent. This confirms the findings of section 4.3. The value of shift dummy or liberalization dummy is higher and further suggests that, due to trade liberalization the SAARC region faces a deficit on its balance of trade. The value of this coefficient is significant at a 10-percent level of significance. In the analysis of the trade balance and trade liberalization (Parikh,Corneliu and Stirbu, 2004) has found that in Asian

region trade balance has been deteriorated by 4.4 percent as trade liberalization has been adopted.

The interactive dummy with respect to domestic income shows that the income effect of trade liberalization has further worsened the trade balance of the SAARC region. A rise in income due to liberalization induces economy to spend on importable. Due to increased spending on imported goods, trade balance further worsens by 0.63 percent.

Adding up the effects of shift dummy and interactive dummy, we observe that overall trade liberalization has deteriorated the trade balance of the SAARC nations by approximately 3.2 percent. Hence, we conclude that due to the liberalization SAARC nation faces a deficit on balance of trade and these deficits need to rectify by either deflation or promoting exports and restricting imports.

The terms of trade take positive value of 0.63 showing that the terms of trade has improved the trade balance of SAARC nations over time, similar sign is observed by (M. Ghani , 2011) for the developing nations, but with a lower magnitude. Whereas the research by (Paulino, 2001) shows a relatively similar value for developing nations.

The above results are widely supported by researchers, research by (Perraton, 2003), (Parikh et al. 2004), (Paulino and Thrilwall, 2004), (Lopez and Thrilwall, 2005) have observed the deterioration of the balance of trade due to the trade liberalization. Some studies like (Ju, Wu and Zeng 2009) consider that trade liberalization has worsened trade balance, but not with such magnitude as reported by the above stated research. However, our results for trade balance show that SAARC has faced trade balance deficits due to trade liberalization.

Chapter

5

Conclusion

5.1 Summary and Conclusion

After the analysis of import growth, export growth and balance of trade in the SAARC region this research has found a few interesting evidences. These evidences can be helpful in the better understanding of trade liberalization in the region. As observed from the literature review of this research. The researchers, who have conducted research in the region have reported the trade liberalization experience in the region to be fruitful in terms of increasing the GDP growth rate, decreasing unemployment and helpful in bridging the gap of income distribution. A few have criticized the trade liberalization, the arguments are based on infant industry protectionism, showing that domestic industry growth and production has reduced as an aftermath of trade liberalization.

The above-mentioned discussion is important and valid, no one can undermine the importance of these researches. However, there is a gap of research regarding the balance of trade and import growth in the region. The import growth due to trade liberalization and the effects of liberalization on the trade balance is equally important as they may in script adverse effects on the overall economic performance of the region.

In concluding the research, there are a few things worth noticing. Considering the export growth model we observe that the reduction in the export duties contribute less, when compared with the effects of trade liberalization. This implies that trade liberalization serve as a better policy tool for achieving higher export growth. Whereas in the long run export growth is affected positively by a rise in income of the trading partner. As the income of the trading partners of SAARC is exogenous, a decline in the income of the trading partners would adversely affect the export growth in the SAARC region. We have also observed that the major exporting partners of the SAARC region are the USA, Europe and the Middle East. Export growth can be enhanced by getting access to new markets.

The import growth model reveals that the liberalization effect captured using shift dummy variable takes a higher value as compared with the reduction in the import duties. This policy shift has increased the import growth significantly.

It is observed from the trade balance model that trade liberalization in the SAARC region has worsened the position of trade balance over the years. The total adverse effect caused to the SAARC region is about 3.2 percent per annum. From the analysis of the capital account of the SAARC region, it is found that deficits incurred in the current account are not being rectified by capital account adjustments, hence leaving the region in the deficit of the balance of payment.

5.2 Policy Implications

From the previous section of summary and results, we can build up some suggestions or policy implications for the SAARC regions' liberalization regime. The deterioration of the balance of payment accounts due to liberalization in the SAARC nation's need to be rectified by either devaluation of the domestic currency, capital inflow or promoting exports as suggested by (Paulino

and Thrilwall, 2004) and (Lopez, 2005).

Higher import growth, due to trade liberalization can causes the balance of trade to get worse. If the adjustments are not being made, this can turn out to be detrimental to the individual economy, as well as for the SAARC region. Trade liberalization has a fruitful impact on the export side, on one hand, and on the other; it has worsened the trade balance due to increase in demand of importable. This issue needs to be addressed and the gap may be filled by either depreciation of the local currency or capital inflows in the shape of foreign direct or indirect investment.

Export growth can be enhanced by getting access to new markets. Import growth has risen more than the export growth this explains that importers have been relatively at ease to import goods as compared to the exporters, who have not been as successful as importers to export their goods to capture international markets. To cope with this situation governments in the SAARC regions may help exporters by providing them with export facilitation or export promotion schemes. SAFTA can also play a helpful role at least in enhancing the regional trade.

Trade liberalization as a tool to achieve higher growth of GDP has its consequences also, the research finding shows that promoting trade liberalization needs to be tackled consciously to avoid the increasing gap between import and export growth. This difference may lead to the disturbing effects on trade balances and overall performance of the economy may be affected adversely.

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