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Economic growth of Bangladesh and external sector behavior

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ABSTRACT

The report entitled "Analysis of Economic Growth and External Sector Behavior" mainly focuses on the study of the structure of the external sector of Bangladesh and its impact on GDP. It involves economic models developed to determine the impact of each sector-Export, Import, Foreign Aid and Remittance, on GDP of Bangladesh. It also involves an analysis of the behavior of these factors in three SAARC countries and the application of the regression model developed. The economic model was developed based on the past behavior of GDP and the external sector. It indicated that Remittance is the sector having the most significant impact on GDP and aid the second most significant. While imports negatively affect economic growth, exports have played a very important role over the period. The remittance of Bangladesh has been increasing over the last few years. Hence, its impact on GDP has also been rising. In the span of 34 years export as percentage of GDP increased from 2.2% to 15.4%. Hence, performance was moderately good. The economy has been suffering from ever increasing trade deficits, despite several export promotional measures. Large import payments mainly account for this problem. Foreign aid shows large fluctuations over the period. Finally, an analysis was conducted on the behavior of the external sectors in the SAARC countries using the regression model. Export was found to be the dominant sector in India, while imports had the minimum impact on GDP. Pakistan was found to be more dependent on export and foreign aid than on remittance and import.

INTRODUCTION

Bangladesh is a developing economy heavily dependent on external factors. External factors such as remittances, exports, imports, foreign aid have had major influence on our economy. Although the impact of these factors has not been uniform and has changed a lot over time. In the 70s, newly independent country Bangladesh went through a structural change that was largely propelled by foreign aid. But in the later years Bangladesh economy has made transition from aid dependence to trade dependence. This study has looked in details of these factors and its impact on our economic growth. We have determined the economic growth on respect of Real GDP growth. Among these four factors export and import directly affect the GDP equation. Remittance allows the recipients to spend it on for consumption and investment. Foreign aid and grants help the economy to strengthen specially for underdeveloped countries. This study has also compared the trends and level of its impact on GDP with three other SAARC countries. The report adds that future growth of Bangladesh will depend on promoting export, sustaining remittances, and triggering export. Bangladesh will require a breakthrough in the performance of the external sector. According to the report, the key to the breakthrough lies in effective integration of Bangladesh's economy with the global economy which will ultimately depend on the ability of political leadership to undertake necessary policy reforms and institution building measures. The objective of the study was to analyze the trend of GDP growth from the year 1975-2005 and four external factors remittance, export, import and foreign aid. The study developed a regression model to show the relationship among these factors and GDP growth

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and showed the level of impact of these factors on GDP. The study was mainly focused on the impact of the four external sectors on GDP. The recent trends in GDP were discussed as well as in the external sectors and explained how they were related to one another. The study was also discussed how the different sectors contribute to GDP and identify the key GDP accelerators.

METHODOLOGIES

Data collection

The data used for the present research included Real GDP of Bangladesh, Sector wise Export, Import, Remittance and foreign Aid. All data have been collected for the period of 1975-2005. The nature of the present study does not necessarily require the use of primary sources for data series therefore all data used in this report were primary. The sources of data were *National Accounts Statistics* published by Bangladesh Bureau of Statistics, *Bangladesh Economic Review* published by the Financial Advisor Wing, Ministry of Finance, *Economic Trends and* www.Earthtrends.com (For the Data of India and Pakistan).

Structuring the Model

A model was developed to show the impact of External Factors on the economic growth of Bangladesh. Then the model was compared with the model of two other SAARC countries (India and Pakistan). In the developed model that economic growth in respect of real GDP growth was observed. Real GDP was used as the dependant variable. For the dependant variable the external factors i.e. remittance inflow, exports, imports and foreign aid were used. For each variable a coefficient has been assigned. It is accepted that the higher the coefficient the higher the impact of the variable on GDP.

Data analysis

On the basis of the model the impact each of factors to the GDP growth have been analysed. In the process the trends of each factor over the years and the composition of the factors have been observed. For each of the factor the existing policies that have had profound impact on our economy have been identified.

RESULTS AND DISCUSSION

Economic growth: Bangladesh

Gross domestic product is an accepted parameter to measure the performance of an economy. As mentioned earlier in this report the economic growth was defined as real GDP growth. Since its independence in 1971, the economy of Bangladesh has experienced significant strides. However, the country's development was hindered by years of political instability and devastating natural disasters. The graph below shows the trend of Real GDP for the country for the period 1971-2005. In the computation of Real GDP the year 2000 has been taken as the base year.

It was observed that there were wide fluctuations in the growth rate of Real GDP over the period (Figure 1). This indicates that the country failed to sustain a suitable growth rate. Bangladesh have experienced negative GDP growth in the year 1975. This was mainly due to the historic 1974 famine. In 1976 it rose again. For the next decade, the value fluctuated. The country was able to maintain a growth rate of around 5% after this period. The fluctuations in the growth rate over the period are partially due to inadequate infrastructure of the economy, weak governance, and low exports. The highest growth rate attained at the end of the period benefited from strong garment exports, large remittance inflows and impressive macro stability.

The structure of the economy has also changed vastly over the last three decades. Long before and after the independence, agriculture accounted for a large proportion of the GDP. But over the years its contribution declined by more than 20%, while the manufacturing sector prospered, boosting the country's export earnings.

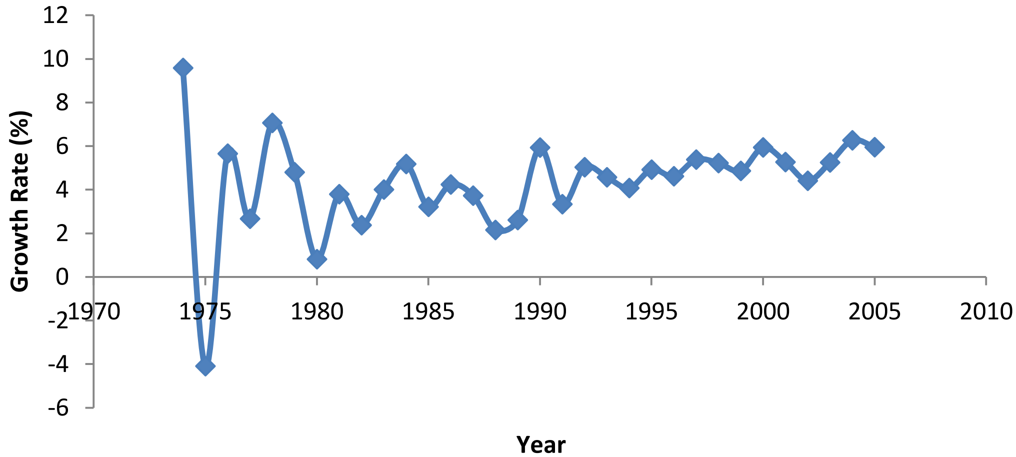


Figure 1
GDP growth rate of Bangladesh.

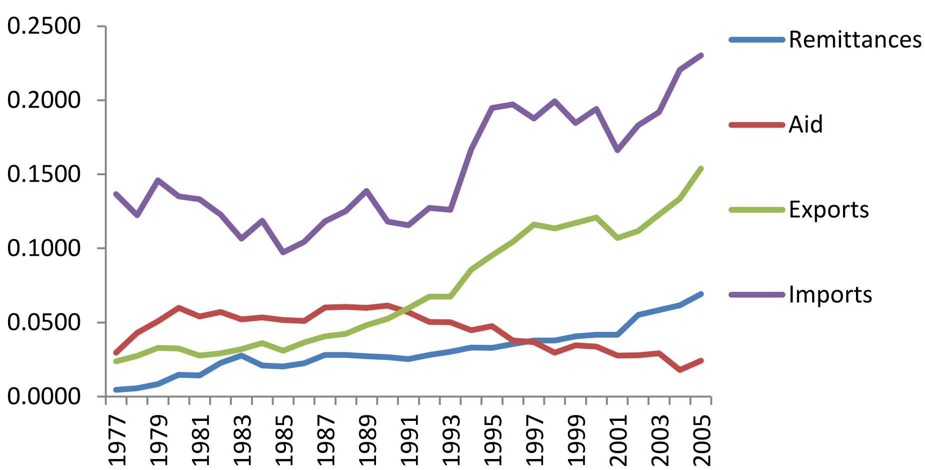


Figure 2
External Factors as % of GDP.

The external sector, mainly export, import, foreign aid and remittance, have always played an important role in the economy. However, there were wide fluctuations on the contribution from each of these sectors throughout the period. In the 1970s, the country experienced a high balance of trade deficit mainly due to domestic shocks of natural disasters and international shocks of oil and food price hikes. Hence, over the decade the country had to rely heavily on foreign aid. In the 1980s, although policy reforms took place to enhance export revenues, the country was still suffering from external dependence. 1990s was a decade of policy reforms to reduce trade dependence and achieve trade orientation. Participation of the workers in the global labor market increased remittances and lower tariffs enabled the country to increase export revenues.

Role of external factors in Bangladesh economy

External factors such as export, import, foreign aid and remittance have always played crucial role in Bangladesh economy. However, impact of these factors has not been consistent. It was observed that analyze the contribution of each factor as a % of GDP over tie provides a vivid picture.

It is observed from the graph that the economy was initially influenced more by imports and foreign aid compared to exports and remittance (Figure 2). During 1977-1985 exports comprised only of 2-5% of total GDP and remittance was 0.5-2% of the GDP. Aid as percentage of GDP was higher than both exports and remittance till 1990. Export and remittance sector have been growing significantly over the years.

In the 1980s Bangladesh economy experienced e shift from import trade policies towards export oriented policies. During this decade RMG and knit ware exports started to dominate the export sector and earned a lot of foreign currencies.

In the 1990s economic reforms gained momentum and successive governments opted for export led policies. A major boost in export was accommodated by the insurgence of RMG sector. In 1990 RMG and knit ware goods exports made up over 65% of the total exports which was 84.95% in the year 1999. During this decade Bangladesh enjoyed a reduced tariff rates by some developing country to export its commodities. Volume of FDI increased during this period and remittance became a prominent sector in the economy. Thus 1990 was a decade of transition from aid dependence to trade orientation.

From 2000 remittance overtook aid as percentage of the total GDP was also observed. Export and remittance continued to rise during this decade. In 2005 remittance was 7% of the total GDP which has been the highest in the economy. Import of goods was mainly influenced by import of petroleum products due to rise in manufacturing industry. Impact of foreign aid on the economy has been declining 2000 onwards.

Regression Model

In order to determine the impact of the external factors on GDP of Bangladesh we have developed a model using multiple regressions. In this model we have used the GDP as the dependent variable and remittances, foreign aid and trade balance as the independent variable. The model developed is presented below.

$Y=\alpha+\beta1*R+\beta2*FA+\beta3*X+ \beta4*I$

Here Y=Real GDP, R=Remittance, FA=Foreign Aid, X=Export, I=Import

$\beta1$=Coefficient of Remittance

β 2= Coefficient of Foreign Aid

$\beta3$=Coefficient of export

$\beta4$=Coefficient of Import

α=Constant

In this model we have accepted that the higher the coefficient the more impact the variable has on the GDP growth.

Table 1
Multiple regression analysis results for real GDP.

Dependent Variable	Real GDP			
Independent Variables	Remittance, Foreign Aid, Trade Balance			
Coefficients	Remittance	Foreign Aid	Export	Import
	5.564	4.346	3.45	-0.983
R	0.997			
Adjusted R^2	0.993			

So the equation stands,
$Y=13045.6+5.564*R+4.346*FA+3.45*X-0.983*I$

The study revealed that remittance has been the most crucial factor amongst other external factors in respect of impact on GDP (1974-2005) (Table 1). Second most significant has been the aid sector. GDP growth of Bangladesh has been experiencing negative impact with the increase in imports. On the other hand export has played very significant role in the economy. But, in the early years of the economy remittance was not as significant as it has been in the later years.

Table 2
Regression analysis of data from 1974 to 1990.

Coefficients	Remittance	Foreign Aid	Export	Import
	4.21	4.65	6.14	-1.1
R	0.982			
Adjusted R^2	0.949			

During the early stage of our economy economic growth has been mostly influenced by aid inflow and exports (Table 2). During this period export of jute and tea was the main driving force of the economy. Gradually the weight age has has shifted to the remittance sector and now it plays a huge role in the economy. Year to year no. of migrants have increased a lot and thus remittance inflow has had significant impact on our economy.

Table 3
Regression analysis of data from 1990 onwards.

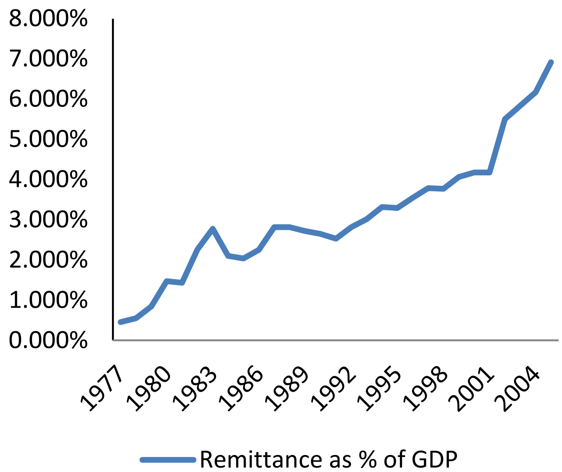
Coefficients	Remittance	Foreign Aid	Export	Import
	4.265	-0.85	3.751	-1.089
R	0.998			
Adjusted R^2	0.993			

But 1990 onwards shows a complete different picture. As we have calculated the coefficient of remittance for the years 1990 onwards (Table 3). It is observed that economy of Bangladesh has shifted to remittance and export from 1990 onwards. Previously we saw from the data of 1976-1990 that aid had a profound impact on the economy. It is very understandable that after independence of Bangladesh foreign aid was very crucial for the restructuring of economy. But it is seen that 1990 onwards aid had negative regression relation with GDP. Import also had a negative coefficient wit respect of GDP.

Contribution of factors to the economy

Remittance

Bangladesh is considered as one of the major labor exporting country of the world. Since independence over 4 million Bangladeshis went abroad. The cumulative receipts of remittances from Bangladeshi migrants during 1976-2003 stood at around US$22.0 billion5. In 2003, through the official channels Bangladesh received 3 billion US dollars and it is estimated that another 3 billion US dollars came in through the informal channels. Bangladesh accounted for 12% of all remittances coming into South Asia and 2% of the overall global remittances (Gupta 2004). According to Ministry of Expatriates Welfare and Overseas Employment, despite a sharp decline in manpower export, the country's remittance earning increased by 27 percent in the year 2005 than the previous year with the total remittance crossing US $ 4 billion mark for the first time. In 2004, the earning was US $ 3.5 billion while 0.25 million Bangladeshis went abroad for job purposes this year against 0.27million last year. Careful analyses of the available household survey data indicate that remittances have been associated with declines in the poverty headcount ratio in several low income countries and in Bangladesh remittances play a significant role to decline poverty by 6 percent. In the year 2000, remittances contribute 4% in total GDP in Bangladesh. Among the top 20 remittance-recipient countries, the position of Bangladesh was fourteenth and amount was US$3.4 billion in 2004(Global Economic Prospect 2006). In Bangladesh, remittance hits a record US $653 million growth in March 2006, which is 23 percent higher in the first three-quarters of current financial year than the previous year (The Daily Star, April 06, 2006).



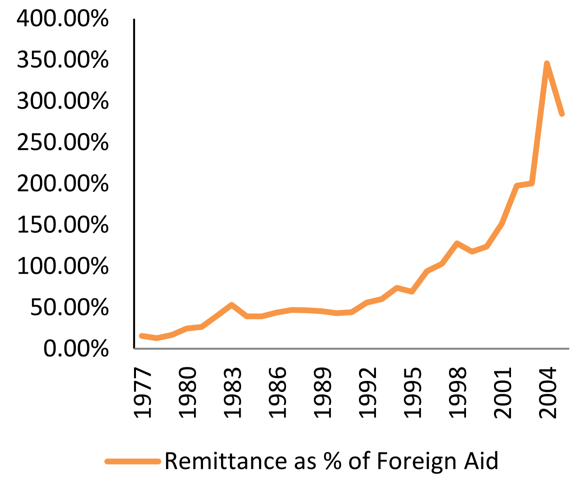


Figure 3
Remittance as percent of GDP (left) and Foreign aid (right).

It is very evident from the data of remittances as percentage of GDP that remittance sector has had profound impact on the economy of Bangladesh. As it is observed from the graph above that remittance inflow has been growing as percentage of the total GDP over the years. Initially GDP growth mostly was influenced by the foreign aid. It is very understandable that after independence aid had the major impact in restructuring the economy. Gradually it shifted to remittance and exports. In 1977 remittance made up only 0.45% of the GDP. But it has been growing gradually and in the 2005 it was 7% of the total GDP. Therefore remittance has played significant role in Bangladesh economy and has the potential to become the most crucial factor in the economy. Another important factor to notice is the remittance as % of foreign aid. In 1977 remittance was only 15.47% of foreign aid. It has gradually increased and in the year 2004 remittance was almost 3.5 times the foreign aid.

Government and private sectors initiatives for transferring remittance

Bangladesh Bank continues its efforts to encourage Non-Resident Bangladeshis (NRBs) to send their money through official channels. Remittance has become a good source of income for some of the banks with strong network abroad. Earlier the Nationalized Commercial Banks (NCBs) were the main official channels to transfer remittance. The NCBs have some overseas branches in United States, Europe and Middle East. Moreover, NCBs have agreement with the foreign banks in many countries for smooth transferring of remittance. But the process of transferring remittance through NCBs is lengthy and takes some days. So, now a day the private commercial banks (PCBs) have become more aggressive in remittance business providing quick and reliable services and attracting the Bangladeshi wage earners to send money home through banking channel. Although the flow of transferring remittance in Bangladesh through official channels is increasing, but according to World Bank staff estimates based on household survey, the informal sources of remittance channel is still higher. The ‘formal’ system means the transferring through banking system and the ‘informal’ system can be through hundi system, friends and relatives, hand carried etc. Hundi is an ancient and informal method of funds transfer and part of Bangladeshi culture. Other countries have different names for the same system - Hawala in parts of India and the Middle East, Fei’chen in China, Padala in the Philippines. This informal system is based on trust and is underpinned by a loose network of traders (shop owners, money changers etc.) who settle transfers amongst themselves, using their existing trading relationships. For the remitter, the hundi system has the advantage of being inexpensive, fast and accessible. Its two significant drawbacks are that it is illegal, and is based purely on trust and is therefore theoretically a high-risk proposition.

Export sector

Export sector has been the major driving force of our economy. Initially this sector was not as significant as it is now (Figure 4). Due to insurgence in RMG and other manufacturing industries it is the main driving force of our economy.

The total exports can be divided into two broad categories namely primary commodities and manufactured goods.

The percentage of manufactured goods exports was always greater than that of the primary commodities export (Figure 5). The primary commodities export has declined over the time span and the manufactured goods export has increased in percentage. It is observed that export goods have the maximum impact on total exports (Table 4)

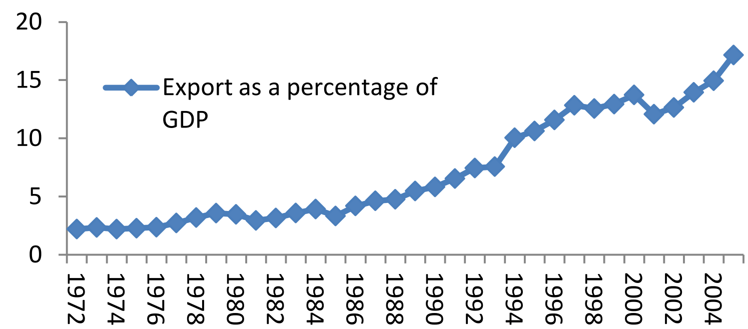


Figure 4
Export as percentage of GDP.

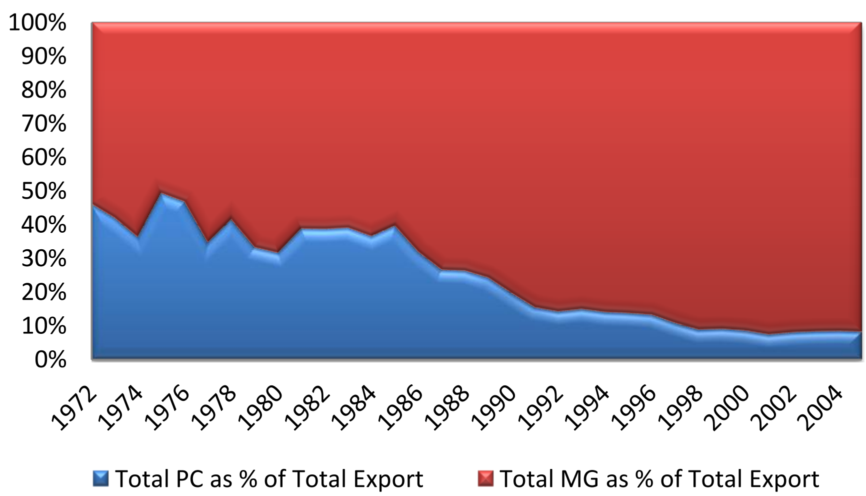


Figure 5
Total export composition of primary commodities (PC) and manufactured goods is shown in the following graph.

Table 4
Regression analysis of data for total export.

Dependent Variable	Total Export				
Independent Variable	Frozen Food, Raw Jute, Tea, Jute Goods, RMG and Knit wares				
Coefficient	Frozen Food	Raw Jute	Tea	Jute Goods	RMG and Knit wares
	1.109	1.961	0.554	1.361	1.039
Adjusted R^2	1.00				

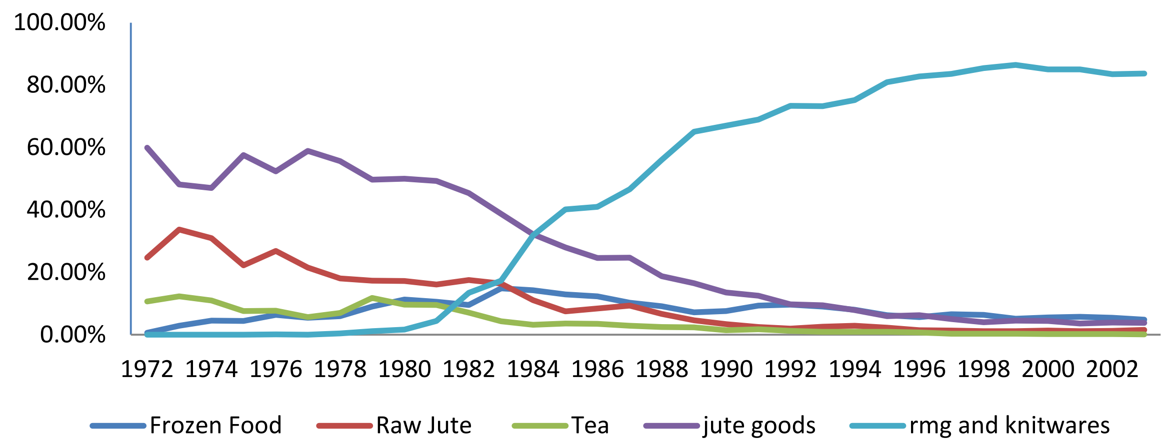


Figure 6
Percentage of total export according to sector

From this model it is observed that apart from tea the value of all other independent variables is more than 1. The high value of the variables indicates highest impact on total export. Here it is observed that the impact of raw jute is highest. The high amount of exports of raw jute in the 1970s caused greater value of of the coefficient, but the export of raw jute has significantly fallen in the recent years. The same thing goes for jute goods. The frozen food exports had higher values in the 1980s which gave a higher value to its coefficient. Though the value of RMG and knit wears is comparatively lower than the other variables it has a higher impact on total export because there was no export in this sector before the 1980s. The exports after 1980s only gave such high value to its coefficient. Keeping all the factors in mind we can say that the RMG and knitwear have the highest impact in total export.

Overall changes in composition of exports and imports

The highly disparate growth patterns of individual export product groups have inevitably led to large changes in the export composition over time. Exports of jute, jute goods, tea and leather, constituted most of Bangladesh's total exports in the early years (Figure 6). These exports precipitously fell drastically in the recent years. At present the dominance of raw jute and jute goods in the export trade of Bangladesh has weakened considerably, and the RMG product group has boomed substantially in the recent years. The share of raw jute in export earnings has fallen from 38% in the year 1972 to to 1.5 in the year 2005. Over the same period, the share of jute goods declined from 52 percent to less than 4 percent. Another main exports item, tea, declined from 6.3% to 0.12%t during the period. Tea's relative export share did increase in some of the years in the 1980s but it declined sharply in later years. The share of leather in total exports showed a significant increase from about 1% in 1972 to more than 16 percent in the late 1980s. But it declined to 2.7 percent in the year 2005.

On the other hand, exports in readymade garments and knit wears dramatically grew over the years. The composition of readymade garments increased from 0.1 percent in 1980 to 43.2 percent in the year 2005. Knit wears export increased from 1% in the year 1989 to 40% in the year 2005. The very fast growth of the readymade garments and knit wears in the export arena are the main reason behind the exports and economic growth in Bangladesh. Though Bangladesh faced setbacks in exporting jute and jute goods, the exports of the RMG product group has more than made up for the loss. The share of frozen food increased from less than 1 percent to 5 percent during the years. Frozen food's share in total exports was higher in the 1980s but its later decline reflected a deceleration in its growth performance in recent years. The export performance of Bangladesh over the years was moderately good. Though it has experienced steady growth over last 35 years but the growth rate has not been highly remarkable. The above trends indicate that Bangladesh's export performance over the last three decades was good. The government has repeatedly emphasized on the export-led growth and the introduction of several export promotion measures, but this measure was not very fruitful. Exports of traditional items are demand determined, while some of the non-traditional exports are supply constrained.

Import sector

Ever since its independence in 1971, the economy of Bangladesh has been experiencing large trade deficits. Despite several export promotional efforts by the government, the export earnings of the country have fallen behind import payments.

A large portion of Bangladesh's imports consists of consumer goods and materials for consumption that are not used for development purposes. In the 1970s and 1980s, these goods accounted for more than two third of the country's imports. The share rose significantly mainly due to external trade liberation in the 1980s.The rest one third of the country's import consist of capital goods and materials for capital goods, which are used for development purposes.

The graph below shows the trend of import payments compared to Real GDP for the period 1979-2005.

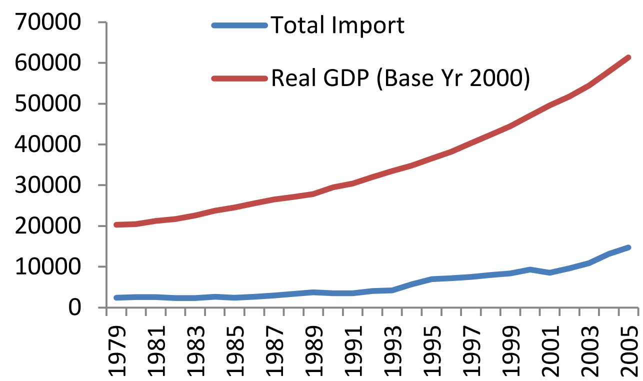


Figure 7
Trend of total import.

The figure 7 shows an overall rising trend with slight fluctuations. The value reaches a maximum in the FY2005 (around 14000 million US Dollars). The overall increase in imports over the period has been about 380%. Payments for the FY2005 rose by about 20.5% compared to the previous year. Increased imports of rice, sugar, fertilizer and capital machinery contributed to this rise. Increased consumer and industrial needs increased the import of petroleum and petroleum products. High oil prices in the international market also boosted the growth.

Import sector composition

The main imports of Bangladesh include machinery and equipment, chemicals, iron and steel, textile, foodstuffs, petroleum products, and cement. The composition of imports can be divided into four broad categories (Table 5).

Table 5
Composition of imports in Bangladesh.

Primary Commodities	Intermediate goods	Capital Goods	Other Goods
Rice	Yarn	-	Sugar
Wheat	Petroleum Products	-	Oil seeds
Cotton and staple fiber	Edible Oil	-	Textiles
-	Fertilizer	-	Cement
-	-	-	Chemical Products

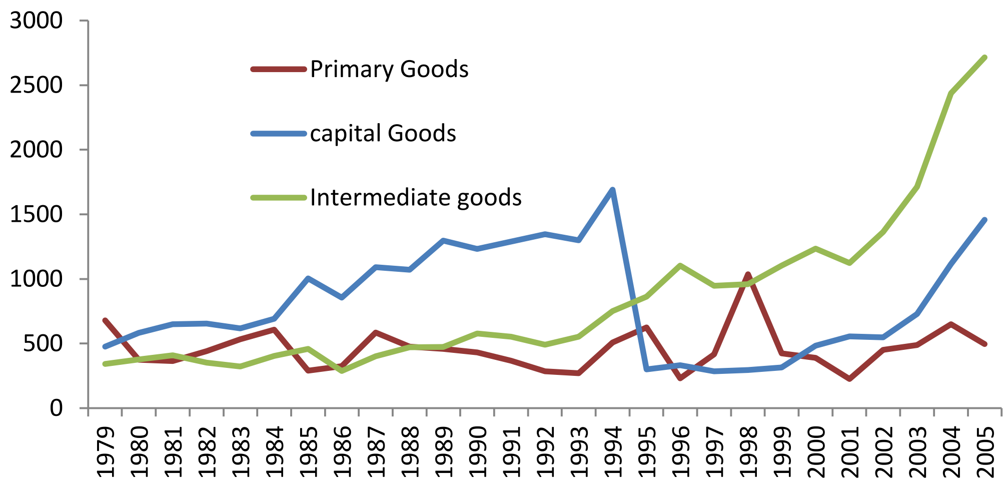


Figure 8
The major import items as a percentage of total import for the period.

During the 1970s, the sharp increase in oil prices resulted in high import payments for crude oil, petroleum and fertilizers. The Balance of Payments condition was also adversely affected due to the impact of a devastating flood, which caused the country to import large volumes of food grains for domestic consumption. Rising import prices and unstable exports earnings further fueled the rise in the deficit. Despite several export promoting measures taken by the government, the trade deficit persisted. The deficit declined near the beginning of 1980s mainly due to import substitute policies adopted by the government. Devaluation of the Bangladesh currency also helped attain the figure. To correct the balance of payments imbalances, restrictive monetary and fiscal policies were also undertaken.

All these measure enabled the country to reduce the gap between exports and imports to about 4.19% of GDP in 1990. Throughout the decade, the trade deficit kept on declining. The country ensured this was sustained by implementing a financial sector reforms program. Despite liberalization of import trade, the country was able to maintain improvements in current account deficit during the late 1990s mainly due to increase in export receipts, decline in deficits in services account, and increase in wage earner's remittances.

The figure 8 shows that throughout the period, the largest component of imports was “other goods”. For the first two decades, the second largest import of the country was capital good. It percentage share, however, declined after 1995.The percentage share of intermediate goods remained relatively steady over the period. The graph shows a decreasing trend for primary goods after 1979 .The value keeps on decreasing with slight fluctuations reaching a minimum at the end of the period.

Bangladesh is a member of World Trade Organization (WTO) and the main import partners of the country are India, Singapore, China, Japan and Hong Kong, Korea and Singapore.

Import Policy

In 1987-1988, imports of as many as 2306 items were controlled. The figure however fell to 117 at the beginning of 1990s. Bangladesh has been pursuing a liberal trade policy since the 1990s. Extensive reform programs have been implemented in trade regime during decade. Reforms have been initiated to dismantle both tariff and non-tariff barriers. With regard to steps towards trade liberalization government has been pursuing a moderate protective policy only in consideration of certain sensitive issues like public health, security and religious bindings. Simultaneously, more liberal import and export policies and programs have been adopted including reduction in tariff slabs. Bangladesh pursued one-year export and import policies in the eighties and two-year policies in the first half of nineties. But five-year export and import policies were formulated and implemented for 1997-2002. In this policy, quality control mechanism of imported goods was strengthened. Requirement for declaring country of origin for import of raw materials were also withdrawn for export-oriented industries. Consequently, raw material imports became easier for 100 percent export oriented industries that accelerate expansion of export industries. Import of gold and silver was made consistent with the Exchange Control Regulations of Bangladesh Bank. Under the policy, expatriate Bangladeshis could import capital machinery and raw materials in any quantity while the foreign investors, as part of their equity share, could import the same on cost insurance and freight (c.i.f.) basis.

A new import policy was introduced by the government for the period 2003-2006. Phenomenal changes and amendments were incorporated in the new Policy to cater to the needs for promotion and protection of local industries, ensure availability of quality goods to the consumers at reasonable prices, develop human resources and create employment opportunities. Two major changes include:

Making industrial raw materials like aluminum scraps, iron and brake acrylic etc importable so that finished products are available at affordable prices; banning commercial import of methanol and harmful acid.

The new import policy seeks to accelerate the industrialization process and help boost up export trade and facilitate agricultural development and public health care as well as ensure public security and protection of environment.

Quantitative restrictions on imports of sugar, salt and some other commodities encourage large illegal imports from India. Similarly, restrictions on imports of sugar, salt and some other commodities encourage large illegal imports from India (World Bank, 1996). Removing these restrictions would expose these industries to greater competition, generate tariff revenues and benefit consumers by reducing prices.

Foreign aid sector

Foreign aid is one of the most important parts of external sector. Bangladesh receives foreign aid in two forms – grants and loans. The grants are given withiout expecting anything in return and the loans are given at a certain payable interest rate.

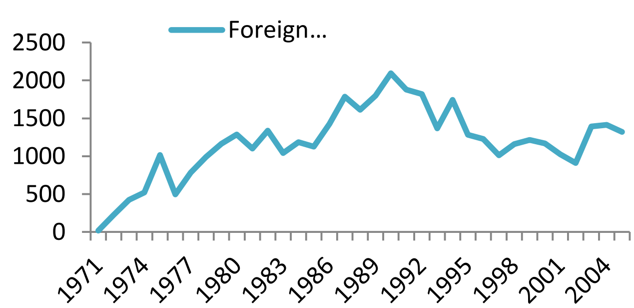


Figure 9
Foreign aid received over the year 1971 to 2005.

From the figure 9 it is observed that the value of foreign aid is not following any particular trend, it has fluctuated highly over the years. Foreign aid had a rapid growth from 1971 to 1975. It had a very high value in the year 1975 but had a sharp decline in the following year. The complicated political situation and unrest at that period was the main reason behind this. After that the foreign aid amount eas increasing at a good rate upto the year 1980. The receipt of foreign aid highly fluctuated upto the year 1985. After that the foreign aid receipt increased considerably up to 1990, but a declining trend as we move on afterwards up to the year 2002 has been observed. After the sharp decline in the year 2002 the receipt of foreign aid has slightly recovered, but it faced a decline in the year 2005.

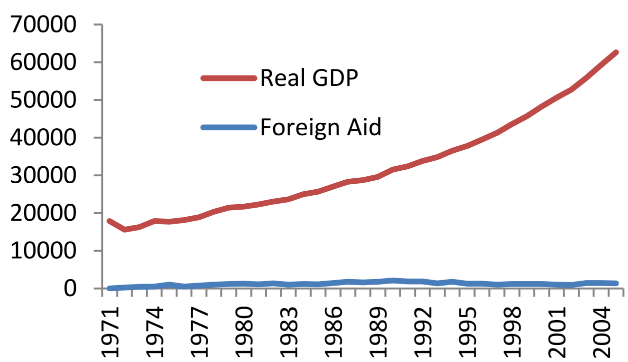


Figure 10
The trend comparison of foreign aid with real GDP

Food Aid

The flow of aid in the food sector was highly fluctuating throughout the considered time period (Figure 11). In 1975 disbursement was a little higher than commitment but it declined sharply the next year, while after maintaining a relatively steady rate commitment had a sharp decline in 1978. After that both risen significantly in 1979 when disbursement was the highest and the amount of disbursement was more than US$350 million.

There was a very contradictory relationship between disbursement and commitment from 1982 to 1986; in 1982 commitment was lowest with a value of less than US$50 million, whereas disbursement maintained a moderately high value, on the other hand, in 1984 disbursement was lowest with a value of less than US$50 million having commitment at its top with a value of more than US$350.

From 1987 to 1997- during these 10 years both had maintained a similar trend. But in the earlier periods of this century, disbursement was around US$50 million while commitment was very low. From the analysis it is observed that disbursement and commitment both had more or less similar highest and lowest value, but at different time periods.

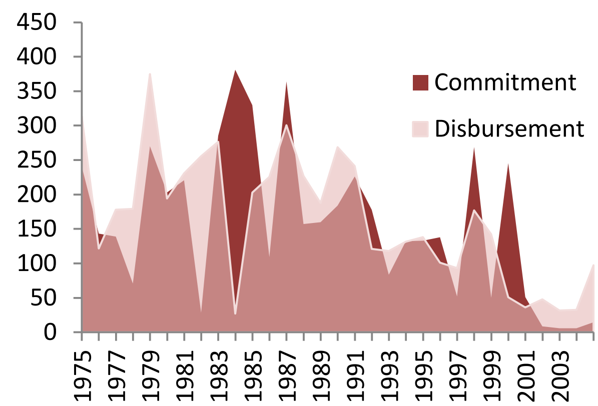


Figure 11
Food aid disbursement and commitment over the year.

Project aid

Regarding the project sector a similar trend is seen in both disbursement and commitment- starting from a low value of US$500 milliion.in both cases, this was the lowest value and the trend went upwards after this (Figure 12). There is continuous fluctuation in commitment with a moderately high value. Commitment was highest in 1998 with a value of US$2000 million. The fluctuation was relatively significant after 1987 to 2001, after a steady trend of a short period of 1985 to 1987. The fluctuation in disbursement was very slow with a sudden fall in 2003 to less than US$1000 million from more than US$1000 million in 2002. It increased in 2004 with its highest value of almost US$1500 million in 2005. From the graph it can be inferred that disbursement was almost always lower than commitment and the growth of commitment was faster than that of disbursement while fluctuation was much sharper in commitment.

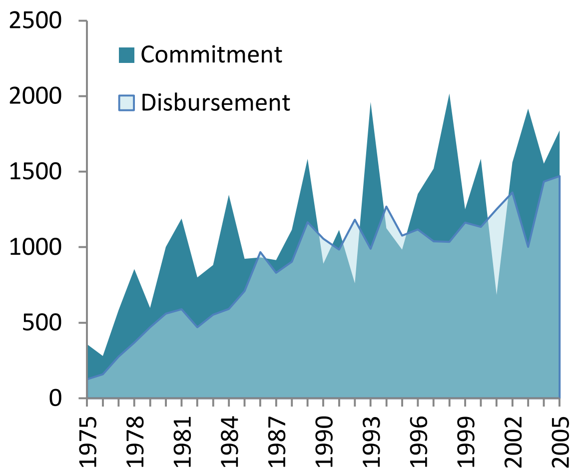


Figure 12
Project aid disbursement and commitment over the year.

Commodity aid

In the case of commodity, both disbursement and commitment had more or less same value in the starting and also in 2005-the last year of our consideration (Figure 13). Like the project sector, in commodity sector, fluctuation was much visible in commitment than in disbursement.

Disbursement had a moderately steady trend from 1978 to 1993 and after that there was a sudden drop in 1997 with a value of US$100 million. It sharply rose in 1998 but dropped again in 2003 having the lowest value of US$00 million. Disbursement was highest in 1988 with a value of more than US$500 million.
Fluctuation in commitment was very regular with high differences which were noticeably low in 1995 having the same lowest value as disbursement during the same time period. It had its highest value twice- in 1977 and in 1989 which was US$600 million.

From 1979 to 1994, disbursement had a steady situation while at that period commitment was highly fluctuating and within this time period, disbursement was lower than commitment when commitment had a high value due to fluctuation.

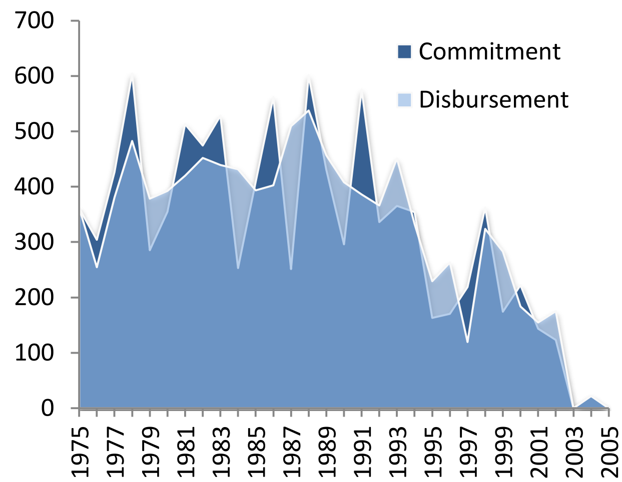


Figure 13
Commodity aid disbursement and commitment over the year.

Change in aid disbursement: Loan and Grant

Loan and grant are the two types of foreign aids that Bangladesh receives. The development need of the country is financed through grant while loan is repaid after a certain period of time with interest. In this case it is seen that starting with a value of around US$500 million in 1976 loan dropped and from that every year grant started rising- both maintained a fluctuating trend over time (Figure 14). In 2004, there was a shap decline in both cases. From 1978 to 1984, there is seen a steady scenario in loan after which it fluctuated upto 1991 and then there was another steady phase upto 2000. Loan was lowest in 1976 with a value of almost US$ 300 million and highest in 2004 with a value of more than US$1200 million. Grant had the same lowest value as loan at the same time period whereas its highest value was a little more than US$800 million in 1994. Fluctuation was almost regular regarding grant.From the analysis, it can be inferred that except for the period of 1978 to 1984, loan was always higher than grant. Though both increased over time, after 1994 grant showed a gradual decline whereas loan increased relatively sharply and was on rise upto 2005- the last year considered.

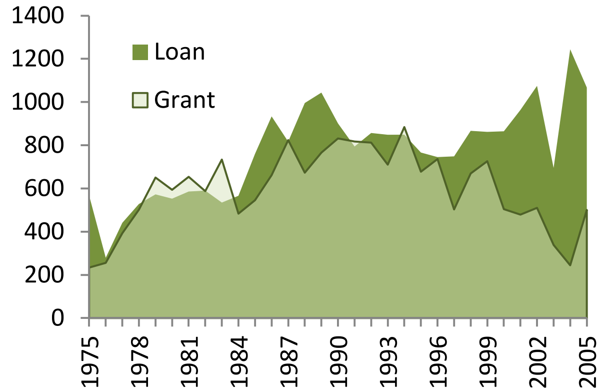


Figure 14
Change in aid disbursement: Loan and Grant.

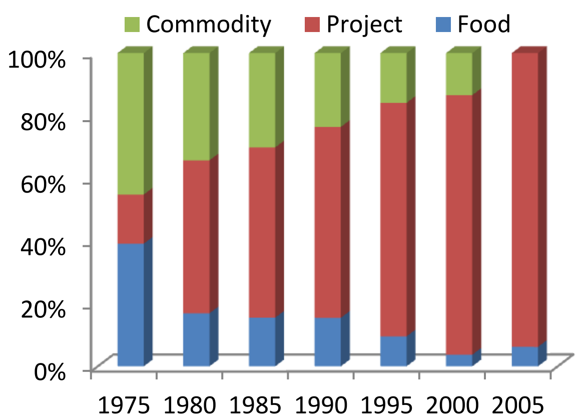


Figure 15
Composition of aid.

Figure 15 shows the trend of every five years in the composition of aid. In all the three cases a very noticeable change can be seen. In 1975 commodity aid had the highest percentage of value with project aid at the lowest position. But after five years, the scenario changed completely- project aid comprised the maximum portion of foreign aid in 1980 and food aid had the lowest portion.

Later on, every five years there was this same trend. Both commodity and food aid continued to decline whereas project aid was increasing continuously. Though in 2000, food aid was nearly 0%, it rose in 2005; commodity aid was 0% in 2005. In 2005, the foreign aid sector was covered almost by project aid alone.

The Regression Model: SAARC Countries

We have analyzed the impact of external factors on the economy of Bangladesh on the basis of the regression model that we have developed. How does this model relate to the other countries? In order to do so we have used the same model in case of some SAARC countries – India and Pakistan.

India

Analyzing the external factors and the GDP of India it is observed from the table 6 that

Table 6 as opposed to Bangladesh economy there is a negative regression coefficient for Indian economy

Regression analysis of data for external factors and GDP of India

Coefficients	Remittance	Foreign Aid	Export	Import
	-13.76	4.04	6.01	2.841
R	0.996			
Adjusted R^2	0.990			

So the equation stands, Y=77976.46-13.76*R+4.04*FA+6.01*X+2.841*I

The main reason can be that, remittance covers a very small portion of the huge Indian economy. So, the impact is not that significant compared to export, aid and imports. Export has been the most dominant external factor for India. Import also has a positive impact of the GDP growth. That shows that India has been very successful utilizing its import goods for the production and contribution to GDP.

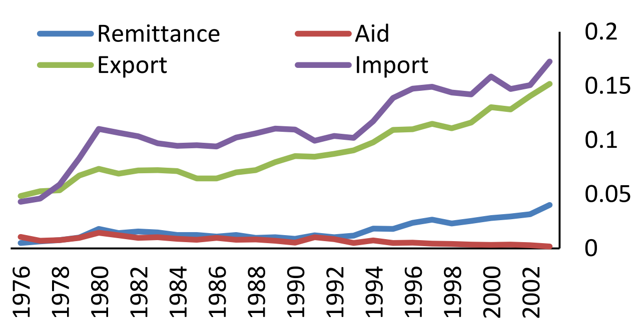


Figure 16
India-External Factors as % of GDP.

It is evident from the figure 16 that export and import have been behaving oppositely. From the year 1976 to 1993 aid as percentage of GDP had been comparatively stable. But since then aid is on the decline. As a percentage aid has always been below 1.5% of the GDP. Although India is one of the largest remittance earning country compared as a percentage to the GDP is quite negligible. So, GDP growth of India has not been strongly influenced by the change in remittance. Trade balance is the most crucial factor for Indian economy. Although India has been "net import" all throughout the trade balance is decreasing constantly. From 1996 onwards export made up more than 10% of the GDP. Trade balance has been in the lower ends most of the times ranging between 1% to 3%.

Pakistan

Coefficients	Remittance	Foreign Aid	Export	Import
	-2.26	.129	6.013	-1.11
R	0.981			
Adjusted R^2	0.957			

$$Y=23765-2.26*R+.129*FA+6.013*X-1.11*I$$

Pakistan economy is highly dependent upon export. Its impact is highest in relation with the increase in export and decrease in import. Export has been the most dominant factor for the GDP growth. Import also has a positive impact of the GDP growth. This shows that Pakistan's economy is more dependent on export and foreign aids compared to import and remittance – which have little effect on remittance and import.

For the past 30 years, the remittance of Pakistanis living abroad has played an important role in Pakistan's economy and foreign exchange reserves. Pakistan received $5.493 billion as workers' remittances during the last fiscal year 2006. It is seen that workers' remittances contribute 4% to the GDP of Pakistan and are equivalent to about 22 percent of annual exports of goods and services. However, the relationship of the Remittance to GDP growth is strongly negative stating that the economy is moving forward with the remittance decreasing over the years.

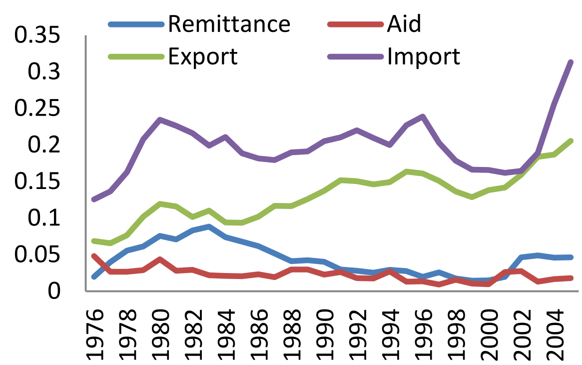


Figure 17
Pakistan- External Factors as % of GDP.

From the multiple-regression model, for the past 30 years, export and import are seen to have the opposite effects as the growth of export is highly correlated to GDP growth and the less the import, the more contribution of GDP it has. It is one of the largest remittances earning country compared as a percentage to the GDP so the growth of the country has been strongly influenced by the change in remittance – as remittance decreases, GDP increases. Pakistan has had a "net export" although the trade balance is decreasing constantly.

RECOMMENDATIONS AND CONCLUSION

Based on the study it is observed that the export and remittance sector have been the most emerging. Therefore we are recommending export and remittance policies.

Export policies

1. Tax benefits for RMG industries: As we have seen from our analysis that RMG has the most emerging sector of our economy. Over the years RMG has been the major contributor to our economy. So, policy makers should make the RMG sector as the "USP" of Bangladesh economy. Therefore to attract more investors to invest in this sector proving these investors with tax benefits can be useful.
2. Quality improvement: If our RMG products want to capture new target market it is compulsory to maintain quality standard. In

order to make trendy products fashion institute can be established.

3. Revival of jute goods: revival of jute industry and producing attractive jute products can certainly create a new vibe in the international market.
4. Strengthen backward linkage industries: if proper channel of backward linkage is ensured our economy can certainly ensure proper utilization of resources. In the process it can create more employments.
5. Participating in global trade fairs: In this way we can create more exposure of our goods to foreign market.
6. Ensuring conducive environment for the exporters: Government needs to ensure that exporters can operate hassle free way.

Remittance policies

1. Establish more technical institutes: The government as well as private sector can establish more high quality technical, polytechnics and vocational institutes that can supply skilled and professional personnel.
2. Encourage the remittance recipients for productive investment: Government as well as NGOs can play important roles in this respect. The government should eliminate regulatory constraints of transferring remittance for NGOs.
3. Creating Enabling environment to invest Remittances in Capital Market: Moreover, the government can make easy access to the capital market for the remittance recipient families. Although at present there is a provision for quota of foreign investors or nonresident Bangladeshis during Initial Public Offering(IPO) of issuing shares, but this process is so critical that most of the time this quota doesn't fulfilled. The government should make this quota system of issuing IPO also applicable for the families of the non-resident Bangladeshis, so that they can invest in the capital market.

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