

The Impact of Recent Currency Devaluation on the Export and Import Performance of Bangladesh: An Empirical Study

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Abstract:- This study examines the effect of the devaluation of local currency BDT against the US Dollar on the import-export performance of Bangladesh. Time series monthly basis data on export, import & exchange rate of Bangladesh from January-2021 to September-2022 is analyzed in this study to explore the impact. Data from secondary sources like Bangladesh Bank, Export Promotion Bureau, etc. is used in this paper. The regression model is applied here to estimate the outcomes. Major findings of the paper are: the regression model estimates the devaluation of BDT against USD has a significant impact on imports of Bangladesh where it shows insignificant impact on exports of the country. In addition, the finding of this paper is against the basic economic theory in the aspect of imports of Bangladesh since despite the devaluation of local currency, the volume of imports is increasing continuously where it needs to decrease according to economics. Moreover, both the exports and imports of Bangladesh are in increasing trend over the last couple of years.

Keywords:- Currency Devaluation, Exchange Rate Volatility, Export, Import, BDT, USD, Regression Model, Bangladesh Bank.

I. INTRODUCTION

Bangladesh has recently graduated as a middle-income country and hoping to become a developed nation within 2041. Here, several economic forces drive or influence the growth and progress of Bangladesh. Among these forces, export, import, remittance, and exchange rate are some key players (Islam, 2019). The exchange rate plays a pivotal role in determining the volume of exports and imports of any country; the same thing is also true for Bangladesh.

The exchange rate plays a vital role in the determination of trade balance and the foreign exchange market is the most powerful force as an important macroeconomic indicator to moderate economic growth and development (Rahman, Majumder & Hossain, 2020). The effectiveness of a forex market and the determination of the exchange rate are baseline tasks for export- or import-oriented countries. It is widely accepted that the exchange rate significantly impacts both imports and exports. Bangladesh is following a floating exchange rate with some interventions from the central bank,

which makes it a managed floating system. The economic theory explains that the floating exchange rates are mostly volatile to influence the trade whereas the fixed exchange rate system is comparatively less volatile in nature.

It is difficult to stabilize the volatile nature of the exchange rate in Bangladesh because several types of exchange rate policies exist in different countries and those countries do not have similar trade patterns- some nations are export-oriented and some are import-based on fixed exchange rate systems or floating exchange rate systems. The exchange rate of Bangladeshi currency (BDT) has shown a fluctuation but in a limited range in recent years against USD (\$) and USD is used as the main currency for foreign trade in Bangladesh. But the aftermath of Covid 19 pandemic and the ongoing war between Russia and Ukraine are seriously destabilizing the Forex market of Bangladesh and BDT has been depreciated several times and is continuously losing its value against USD. According to economic theories, the devaluation of local currency has a significant impact on both imports and exports. In this paper, the effect of the recent devaluation (January 2021-September 2022) of BDT against USD on the imports and exports of Bangladesh is assessed to find out whether there are any significant results or not.

II. METHODOLOGY

The study is analytical in nature. To serve the objective of observing the impact of ongoing BDT depreciation against US Dollar on the foreign trade of Bangladesh, time series data is used. This study is based on information gathered from secondary sources such as Bangladesh Bank, Export Promotion Bureau Bangladesh, Bangladesh Bureau of Statistics, different research articles, newspapers and journals, etc. In this paper, the monthly basis data from January 2021 to September 2022 is taken into account.

Variable	Details of Variable	Source of Data
Exp	Value of export, USD (\$), Billion, FOB	Bangladesh Bank, Export Promotion Bureau
Imp	Value of import, Balance of Payment, USD (\$), Billion	Bangladesh Bank
Exv	Exchange rate	Bangladesh Bank,

	volatility (foreign exchange rate, BDT to 1 USD, monthly, yearly)	www.ceicdata.com
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➤ *Basic Model*

The effect of the devaluation of Bangladeshi currency-BDT on export and import is assessed in two functional forms import and export function. These two functions are presenting the following two equations:

$$Y_1 = \beta_0 + \beta_1 X_t + \epsilon_t \dots\dots\dots (1)$$

$$Y_2 = \beta_0 + \beta_2 X_t + \epsilon_t \dots\dots\dots (2)$$

Here, Y_1 = Import, Y_2 = Export, X_t = the USD Exchange rate, β_0 = the constant term, t denotes time, and ϵ_t = denotes residual.

III. LITERATURE REVIEW

For conducting this report, it is very important to explore different literature and previous works that have already been conducted on the selected areas and other relevant works with the topic. In this part, the relevant and available sources of literature will be explored and key findings of all those works will also be presented.

Currency devaluation is the reduction of the value of a country’s currency against the value of other currencies. Currencies are devalued by the government to reduce the cost of exports in foreign markets. Devaluation can also be referred to as a downward adjustment of a country’s official exchange rate in relation to other countries (Krugman & Obstfeld, 1999).

In a case where a country revalues its currency higher (the opposite of devaluation) in response to positive conditions in the economy to reduce inflation or to satisfy investors and, this would result to a rise in the value of an existing currency (Krugman & Obstfeld, 1999).

Rana, Anik, & Biplob (2019) stated that exchange rate stabilization is important while in transmitting money among the countries. A country can be caused by the losses for currency appreciation or depreciation. The foreign exchange department of every country especially watches and analyzes the exchange rate to save their position. The changes in exchange rates may occur daily based on the market forces from one country to another the forces are demand and supply. In the case of Bangladesh, remittance and GDP growth strongly influence the exchange rate and help to appreciate the value of local currency.

Sultan (2008) in his paper ‘*Trade, industry and Economic Growth in Bangladesh*’ explained that the growth of exports is a crucial factor of economic development for the acquisition of foreign exchange for the import of goods and services. In other words, export growth is seen as a determinant of import capacity, which in turn, is a

determinant of the level of domestic economic activities. In recent years, Bangladesh has been achieving not only a significant increase in the volume of exports but also an important change in the composition of exports away from traditional items, and towards new products such as software exports etc.

Rahman, Majumder & Hossain (2020) in a study ‘The Impact of Exchange Rate Volatility on Export and Import in Bangladesh’ examined the exchange rate volatility impact on imports and exports in Bangladesh. They have found that the exchange rate has a significant influence on the growth of the overall trade volume of Bangladesh. The exchange rate volatility has a negative impact on trade volume and also poses a risk for the import-export of the country.

Aziz (2008) ‘*The role of the exchange rate in trade balance: Empirics from Bangladesh*’ found that it is difficult to stabilize the volatility nature of the exchange rate in Bangladesh because several types of exchange rate policies exist in different countries and those countries are not similar in trade patterns where some nations are export-oriented and some are import based on fixed EXR systems or floating EXR system. There is an advantage for Bangladesh which is the exchange rate or trade pattern among the South Asian countries are similar in regional or geographical locations, which helps trade creation, and exchange rates are sometimes moderated by geographical similarity. On the other hand, the exchange rate or trade pattern is quite different in European and Arabic countries.

Barua, Kar & Mahub (2018) ‘*Risks and their management in ready-made garment industry: Evidence from the world’s second-largest exporting nation*’ stated that RMG-the main sector of exports of Bangladesh, has ignored the impact of foreign exchange volatility risk and they don’t take any effective precautionary measures to minimize the forex volatility risk. Rather they ignore the loss or gain from the appreciation or devaluation of the local currency BDT and simply convert the export proceeds in spot exchange rate. There are a limited number of research works on the exchange rate volatility impact on the export-import performance of Bangladesh. However, the majority of the studies are conducted based on the overall export-import of Bangladesh and how it is influenced by volatility in the exchange rate market. Moreover, the historical data on the exchange rate of USD to BDT did not show any drastic rise or fall in recent years. However, the exchange rate of USD is in an unstable situation throughout the months of 2022 and a continuous devaluation is occurring in BDT against USD. As far as it has been explored, there is no such study that examines the recent devaluation (January 2021- September 2022) of Bangladeshi currency BDT against USD and its impact on the overall export-import volumes of Bangladesh. Thus, this paper will add something new to the research world.

IV. ANALYSIS AND RESULT

A. The Nature of Exchange Rate Volatility of US Dollar against BDT

In foreign trade, usually, a country needs to export or import goods and services using a foreign currency. Bangladesh used several currencies in foreign trade in the past but from January 1983, it adopted US Dollar as the intervention currency due to its growing importance in international settlements. However, on 29 May 2003, Bangladesh Bank started to follow the floating exchange rate system where the exchange rate is usually determined by the market without any intervention (Aziz, 2008). Currently, Bangladesh is using a pegged floating rate system with limited intervention by the central bank.

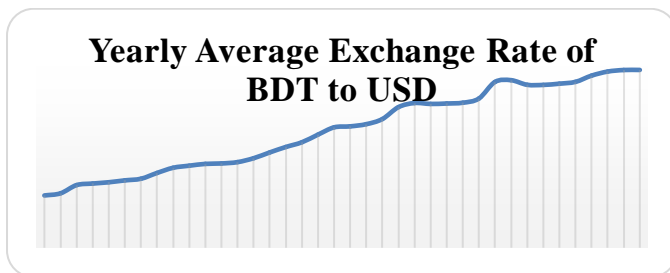


Fig 1 (Source: Bangladesh Bank & www.ceicdata.com, 2022)

Bangladesh uses USD for the majority of its foreign trade settlements. If we see the below chart of the yearly average exchange rate of Bangladeshi currency (BDT) to USD, it is clear that, over the periods, BDT has been losing its value against USD which means USD is getting stronger against Bangladeshi Taka. Here, a gradual devaluation of BDT is observed from 1984 to 2021. But there is no sharp jump in the value of USD in any year rather the devaluation of BDT happened year by year gradually.

B. Export-Import Growth Nature of Bangladesh

Bangladesh is mainly an import-dominated country where its import volume is always higher than the export and this makes the negative Balance of Trade (BoT) figure of the country. If we closely monitor the export-import trend of the country, it can be seen that both export and import of the country are in an increasing trend except for FY2019-2020 where both items declined but it happened due to the sudden outbreak of the Covid-19 pandemic. However, one thing is obvious that, import growths were much higher than that of export.

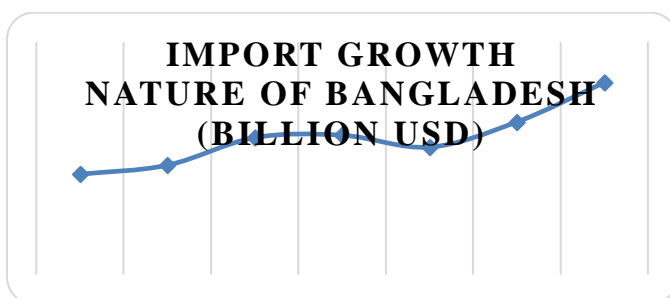


Fig 2 (Source: Bangladesh Bank, 2022)

In the last FY 2021-2022 Bangladesh has crossed \$80 billion marks in imports which are 25.78% higher than imports in 2020-2021. The given line chart shows that the import of Bangladesh is increasing trend except for 2019-2020 due to COVID-19. That means, the volume of imports of Bangladesh is ameliorating year by year and it is making the task of maintaining a sound current account balance more complex.

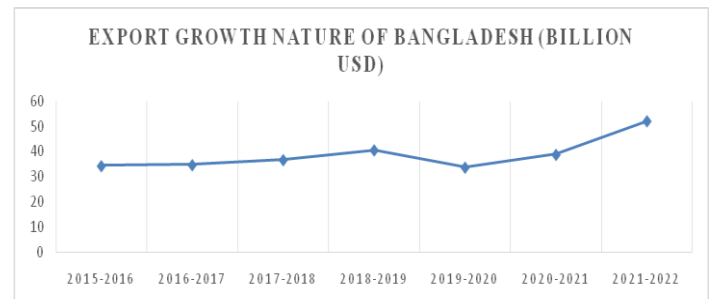


Fig 3 (Source: Bangladesh Bank & Export Promotion Bureau, 2022)

Bangladesh has touched the USD 50 billion mark in exports which is quite remarkable. The export growth of Bangladesh has also shown positive growth over the last couple of years except in 2019-2020 due to covid-19 outbreak. The growth of exports is a good sign for the economy of Bangladesh. But the widening gap between import and export is also posing challenges for the government as well as the central bank to maintain healthy foreign exchange reserves in the country.

C. Impact of Devaluation of BDT on Import and Export of Bangladesh

The foreign exchange market of the country remained in a limited fluctuation over the last couple of years. Moreover, the exchange rate of BDT to USD remained between BDT 84 to BDT 86 from January 2021 to April 2022. But, from May 2022, BDT started to devalue against USD and this trend is continuing till date. In September 2022, the official exchange rate of USD climbed to an all-time high position of BDT 100 which forced BDT to lose its value tremendously. And this rise is continuing. There are several reasons behind this event such as the aftermath of Covid-19, the Russia-Ukraine War, and the breakdown of the global food supply chain and supplies of energy which stimulated global inflation in increasing trend and raised the demand for USD-the prevalent currency in global trade in a high position.

Time	USD Rate	EXPORT	IMPORT
Jan-21	84.80	3.44	5.33
Feb-21	84.80	3.19	4.72
Mar-21	84.80	3.08	4.28
Apr-21	84.80	3.13	2.86
May-21	84.80	3.11	3.53
Jun-21	84.81	3.58	4.81
Jul-21	84.80	3.47	4.23
Aug-21	84.95	3.38	3.86
Sep-21	85.26	4.17	4.65
Oct-21	85.61	4.72	6.15
Nov-21	85.78	4.04	6.89
Dec-21	85.80	4.90	7.64
Jan-22	85.95	4.85	8.33
Feb-22	86.00	4.29	8.32
Mar-22	86.06	4.76	7.72
Apr-22	86.23	4.74	7.72
May-22	87.18	3.83	7.27
Jun-22	92.03	4.91	7.67
Jul-22	93.89	3.98	6.38
Aug-22	94.91	4.61	7.38
Sep-22	100.82	3.91	7.55

Table 1: The exchange rate of USD and monthly export-import performance of Bangladesh (in billion USD) (Source- Bangladesh Bank & Export Promotion Bureau, 2022)

On the other hand, the imports between January-September 2022 displayed a complete fluctuation where the import in January 2021 was the highest and the same in April 2021 was the lowest in 2021. The imports in 2021 were in between the \$2.8-5.4 billion range. However, the imports of Bangladesh showed a significant rise in 2022. It fluctuates between \$6.3 billion to \$8.4 billion in the months of 2022 which is much higher compared to the same in 2021.

However, the exports of Bangladesh have displayed stability in 2021 where it moved between \$3-4.2 billion. However, with the devaluation of BDT, which facilitates exporters with higher export proceeds, the exports started to boost gradually. In 2022, the lowest monthly export is almost close to the highest exports in 2021. However, the export volumes in 2022 do not maintain the rising trend rather fluctuate in a range much higher than that of 2021.

D. Regression Analysis

Using the three variables we define two models as the following. So, the equation can be written as:

$$Y_1 = \beta_0 + \beta_1 X_t + \epsilon_t \dots\dots\dots (1)$$

$$Y_2 = \beta_0 + \beta_2 X_t + \epsilon_t \dots\dots\dots (2)$$

Here, Y_1 = Import, Y_2 = Export, X_t = the USD Exchange rate, β_0 = the constant term, t denotes time and ϵ_t = denotes residual.

Regression Analysis:

Variables	Coefficients	Standard Error	t Stat	P-value	Comments
Intercept	-9.332729662	7.292546194	-1.279762845	0.216035148	
USD Exchange rate	0.176261299	0.083401622	2.113403734	0.048020924	Significant

Model-01

Variables	Coefficients	Standard Error	t Stat	P-value	Comments
Intercept	0.418391395	2.955091297	0.141583238	0.88889965	
USD Exchange rate	0.041058068	0.033796071	1.214876961	0.239295619	Insignificant

Model-02

Here are two regression models:

$$Y_1 = -9.3327 + 0.17626X_t \dots\dots\dots (1)$$

$$Y_2 = -0.4183 + 0.04105X_t \dots\dots\dots (2)$$

In the first regression model, the dependent variable is Import which depends on the predictor variable USD Exchange rate. The level of impact of the independent variable can be obtained by looking at their respective coefficient. The coefficient means that a unit increase in the USD Exchange rate will result in a 0.17626 unit increase in import and the coefficient is significant which indicates that the USD Exchange rate has a positive impact on the import of Bangladesh.

In the second regression model, the dependent variable is Export which depends on the predictor variable USD Exchange rate. The coefficient means that a unit increase in the USD Exchange rate will result in a 0.04105 unit increase in Export and the coefficient is insignificant.

V. MAJOR FINDINGS

- The devaluation of BDT has a positive impact on imports of Bangladesh
- The devaluation of BDT has an insignificant impact on the exports of Bangladesh.
- Both the exports and imports of Bangladesh have shown an increasing trend of growth in the last couple of years.
- Surprisingly, the import volumes of Bangladesh in 2022 go against the basic economic theory where the devaluation of local currency makes imports costlier and drives a decline. But, in the case of imports of Bangladesh in 2022, with the continuous devaluation of BDT, the volume of imports continued a rising trend and it may touch the \$100 billion mark for import 1st time in the history of Bangladesh in 2022.
- The gap between exports and imports has been rising in year by year in recent years which ultimately broadens the current account deficit and poses significant pressure on the Forex reserve of the Country.

VI. REASONS BEHIND THE RECENT DEVALUATION OF BANGLADESHI CURRENCY (BDT)

- Due to the increased gap between demand and supply of the US dollar, the foreign exchange market of Bangladesh has gone out of control in recent months.
- According to several economists, the rising import spending has put pressure on the forex market in the country and they have suggested curbing the imports.
- The global hike in prices of fossil fuel, edible oil, natural gas, commodities, food items, etc. is pushing up the demand for the US dollar as the same volume of imports requires increased payment volumes now.
- The ongoing war between Russia and Ukraine has disturbed the global supply chain of food and several sources of energy since they are important global suppliers and countries have jumped for other alternative sources which drives the continuous price hike in the world market.
- According to Dr Salehuddin Ahmed, former Governor of Bangladesh Bank, the increased remittance and export earnings are lower than the import cost which poses a high demand for USD as well as devaluates BDT.

VII. RECOMMENDATIONS TO CONTROL THE DEVALUATION OF BDT

- The central bank needs to take effective measures to discourage unnecessary and luxury goods.
- By boosting domestic production especially agricultural products, the rising trend of imports can be controlled.
- Experts have suggested Bangladesh Bank increase supervision to control trade-based money laundering which is also increasing imports in the guise of a medium to send black money in foreign countries.
- Moreover, several effective initiatives can be taken to encourage sending remittances through proper banking channels.
- Bangladesh needs to explore its own territory in the Bay of Bengal to find out available sources of natural gas and fossil fuels which will diminish the need for energy imports and save foreign currencies.

VIII. CONCLUSION

Bangladesh is an import-dominated country where it imports higher than the exports (Islam, 2019). Since Readymade Garments is the main export sector of the country and we have to import the majority of the raw materials of RMG products, it also drives to increase the import along with energy, electronic items, food supplies, and so on. Due to the expansion of the local market, GDP size, and purchasing power of the people, the volume of imports is increasing every year. The volume of exports is also showing a rising trend in recent years. Since the exchange rate of USD was in a limited fluctuation for a couple of years, it didn't display any significant impact on the export-import performance of the country. But, from the beginning of the ongoing year of 2022, the devaluation of the local currency BDT continues over the months with the rising strength of the USD. Due to this, the volume of exports is showing a remarkable rising trend in 2022. However, the trend of imports is running against the basic economic theory where the devaluation of local currency would make the imports costlier, thus diminishing the imports. But, here in the case of Bangladesh, the imports in 2022 are increasing in an upward trend over the months. The devaluation of BDT has a significant impact on the imports of Bangladesh, but the impact is insignificant in the case of export growth of the country according to regression analysis using recent data. The continuous devaluation of the local currency BDT is not a good sign for the economic stability and growth of Bangladesh by ameliorating the inflation in the local market. Also, the increasing trend of imports will create a burden for maintaining the balance in the BoT. Thus, both the government and Bangladesh Bank should take effective and timely actions to control the continuous devaluation of BDT and to increase the exports along with controlling the volume of imports.

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