

# Monetary Depreciation and Export Performance of Bangladesh

## Value Does Matter

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**Abstract:-** Currency devaluation and its impact on export performance is critical for developing countries like Bangladesh. This paper examines the relationship between currency Depreciation and export performance in Bangladesh from a macroeconomic perspective, focusing on aggregate data whose main contribution comes from major export sectors such as ready-made garments, jute, jute products, fish, shrimp, leather and leather products. The study sought to determine the extent to which currency devaluation affects the export performance of these sectors and to examine why countries with similar economic situations perform better than Bangladesh. The results were derived with the conclusion that currency depreciation (DoC) resulting from exchange rate volatility (ER) is not the sole factor affecting export performance. The co-integration of many other factors, namely the interest rate (IR), inflation (IF), foreign direct investment (FDI), balance of payments (BoP), and GDP per capita is inextricably linked. By analyzing the data from 1990 to 2020, the study has identified potential strategies and lessons that Bangladesh can learn from the export success of other countries to improve its performance.

**Keywords:-** Devaluation; Currency; Export Performance; Exchange Rate; Interest Rate; Inflation; Foreign Direct Investment; Balance of Payments; GDP Per Capita; Bangladesh.

### I. INTRODUCTION

Devaluation of currency and its impact on export performance is a critical issue for developing countries like Bangladesh. This paper examines the relationship between currency devaluation and export performance in Bangladesh, focusing on aggregate macroeconomic data of which major contributors are export sectors such as ready-made garments, jute, jute products, fish, shrimp, leather, and leather products. The study sheds light on the extent to which currency devaluation affects the export performance of these sectors and explores the reasons why countries with similar economic situations perform better than Bangladesh. In addition, the study identifies possible strategies and lessons that Bangladesh can learn from the export success of other

countries to improve its own performance by analysing data from 1990 to 2020.<sup>1</sup>

#### ➤ Devaluation

Devaluation is the intentional lowering of the value of a currency against other currencies or a standard unit of value such as gold. It is an action often taken by central banks or governments to control the value of their currency relative to foreign currencies. An example of devaluation is the rising trend in the exchange rate seen at Table 1. In the context of the research on the devaluation of currency and export performance in Bangladesh, devaluation would involve a decrease in the value of the Bangladeshi taka compared to other international or regional currencies, such as the US dollar or the Euro.

Table 1 Year Wise Export and Exchange Rate

Year	Export Value Index (2000 = 100)	Nominal Exchange Rate (Taka to USD)
1990	26.12	34.563
1991	26.39	36.59
1992	32.78	38.95
1993	35.60	39.57
1994	41.58	40.21
1995	54.80	40.28
1996	66.50	41.79
1997	75.63	
1998	80.15	46.91
1999	86.04	49.09
2000	100.00	52.14
2001	95.16	55.81
2002	96.24	57.89
2003	109.41	58.15
2004	129.99	59.51
2005	145.52	64.33
2006	184.73	68.93
2007	194.92	68.87

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2008	240.56	68.60
2009	236.07	69.04
2010	300.43	69.65
2011	382.52	74.15
2012	393.29	81.86
2013	455.68	78.10
2014	475.90	77.64
2015	506.79	77.95
2016	546.16	78.47
2017	561.13	80.44
2018	614.37	83.47
2019	615.70	84.45
2020	525.99	84.87

Source: World Bank<sup>2</sup>

Devaluation can occur for various reasons, such as improving export competitiveness, reducing trade imbalances, or stimulating economic growth. The devaluation of a currency can affect various aspects, particularly in terms of export performance. When a currency is devalued, it effectively becomes cheaper for foreign buyers to purchase goods and services from the country that devalued its currency. This can lead to increased competitiveness of a country's exports, as they become more affordable to international buyers.

In the case of Bangladesh, devaluation may help promote its export sector by making its goods and services relatively cheaper in international markets. This can result in increased demand for Bangladeshi products, thus potentially boosting export performance. However, it is important to note that the impact of devaluation on export performance is multifaceted, as it can be influenced by factors such as the export sector's competitiveness, the country's infrastructure, trade policies, and global economic conditions.

By conducting research on the devaluation of currency and export performance in Bangladesh, one can analyze the relationship between currency devaluation and its effects on the country's export sector. This research can provide insights into the potential benefits, challenges, and implications of currency devaluation as a tool for enhancing export performance in Bangladesh, contributing to a deeper understanding of the dynamics between currency exchange rates, exports, and overall economic growth.

➤ *Devaluation and Depreciation*

Devaluation refers specifically to a deliberate reduction in the value of a currency as set by the government or central

<sup>2</sup> Official exchange rate refers to the exchange rate determined by national authorities or to the rate determined in the legally sanctioned exchange market. It is calculated as an annual average based on monthly averages (local currency units relative to the U.S. dollar).[Export values are the current value of exports (f.o.b.) converted to U.S. dollars and expressed as a percentage of the average for the base period (2000).]

bank. It is typically done through an official announcement or intervention, aiming to adjust the exchange rate downward against other currencies. Devaluation is a policy measure used to boost a country's export competitiveness and address trade imbalances.

Depreciation refers to a decrease in the value of a currency in the foreign exchange market due to supply and demand dynamics. Unlike devaluation, which is a deliberate government action, depreciation occurs naturally in response to market forces. Factors such as economic conditions, interest rates, trade imbalances, and investor sentiment can cause the value of a currency to decline in the open market. Fig.1 shows the devaluation and depreciation of Bangladeshi Taka and Indian Rupee over time.

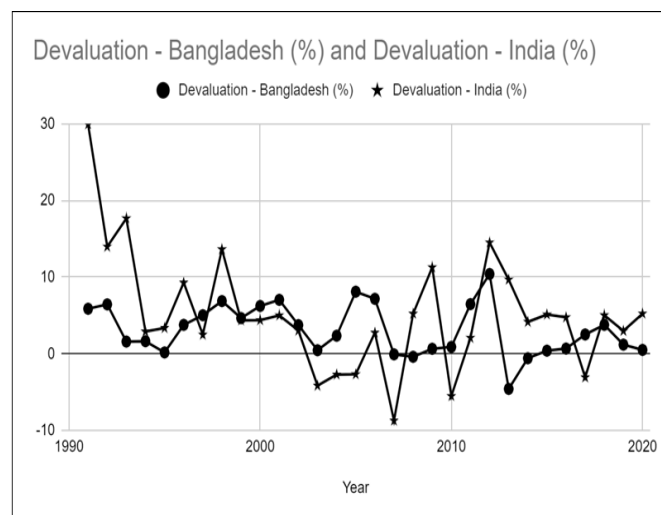


Fig 1 Devaluation of Currency (Official Exchange Rate) Bangladesh and India (Source: WB data)

In the research on the devaluation of currency and export performance in Bangladesh, it is crucial to differentiate between devaluation (a policy-driven action) and depreciation (a market-driven phenomenon). Devaluation implies that the Bangladeshi government or central bank has taken specific measures to reduce the value of the country's currency intentionally. Depreciation, on the other hand, may occur regardless of government intervention due to various market factors.

Understanding the distinction between these two concepts is essential when analysing their effects on export performance. Research in this area can investigate the impact of both devaluation and depreciation on the export sector in Bangladesh. By examining how intentional devaluation and market-driven depreciation influence export competitiveness, trade patterns, and overall economic performance, researchers can provide valuable insights for policy-makers and stakeholders in Bangladesh's economy. However as the delineation of sharp line between market force and government deliberation are eventually not declared officially devaluation and depreciation are synonymously used for estimation purpose.

➤ *Devaluation: Fixed, Floating and Managed Exchange Rate Regime*

Devaluation refers to the intentional reduction in the value of a country's currency in relation to other currencies. It is a measure taken by the government or central bank to adjust the exchange rate downward. Devaluation aims to enhance a country's export competitiveness by making its products relatively cheaper in international markets, thereby potentially boosting export performance.

In a fixed exchange rate regime, the value of a country's currency is directly linked to a fixed value or a specific currency. The government or central bank typically intervenes in the foreign exchange market to maintain the exchange rate within a narrow band. Under a fixed regime, devaluation can be accomplished by official action, adjusting the fixed exchange rate downward to make the currency less valuable relative to other currencies.

In a floating exchange rate regime, the value of a country's currency is determined by market forces of supply and demand. The exchange rate fluctuates freely based on various economic factors, such as interest rates, inflation, trade imbalances, and investor sentiment. In a floating regime, devaluation happens naturally as the currency's value decreases in response to market dynamics and is not directly controlled by the government.

Managed exchange rate regimes exhibit elements of both fixed and floating regimes. In a managed regime, the central bank or government occasionally intervenes in the foreign exchange market to influence the exchange rate. They may do so by buying or selling their currency to maintain a desired value or to manage excessive fluctuations. In this case, devaluation can be achieved through official interventions where the authorities deliberately decrease the value of the currency.

For research on the devaluation of currency and export performance in Bangladesh, it is important to consider the exchange rate regime in place. Understanding the specific regime employed by Bangladesh's central bank or government can provide insights into the mechanisms through which devaluation may be carried out and its potential impact on export performance. Analyzing the relationship between exchange rate regimes, devaluation, and export outcomes can contribute to a comprehensive understanding of the interactions between currency valuation and international trade dynamics in the context of Bangladesh.

➤ *Bangladesh Manages Exchange Rate Dynamically by Fixed and Managed Exchange Rate Regime*

In Bangladesh, the exchange rate is dynamically managed without a flexible market based on demand and supply. This means that the country's central bank, the Bangladesh Bank, actively intervenes in the currency market to influence the exchange rate rather than allowing it to be determined solely by market forces.

Unlike in a flexible exchange rate system, where the exchange rate is determined by the supply and demand for currencies in the foreign exchange market, Bangladesh adopts a managed exchange rate regime. The central bank monitors and adjusts the exchange rate in response to various factors, such as inflation, monetary policy objectives, and the country's external trade balance.

The objective of managing the exchange rate is to support Bangladesh's economic goals, particularly in relation to its export performance. One possible area of research in this context is the effect of currency devaluation on export performance. Fig.2 shows the management of devaluation and depreciation of Bangladeshi Taka with a comparison with Bhutan's Ngultrum which is pegged with Indian Rupee.

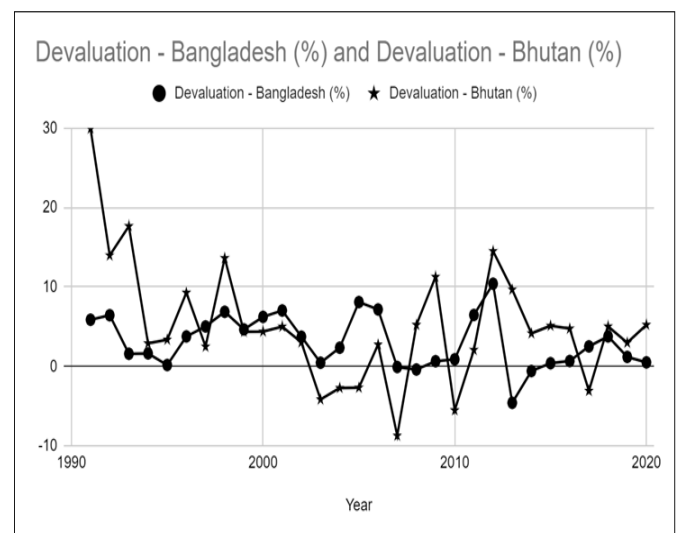


Fig 2 Devaluation of Currency (Bangladesh and Bhutan)<sup>3</sup>

By examining the relationship between currency devaluation and export performance in Bangladesh, researchers can gain insights into the impact of exchange rate policies on the country's international trade. This research can help policymakers and economists understand the effectiveness of exchange rate management strategies in promoting export growth, boosting competitiveness, and ultimately contributing to economic development in Bangladesh.

The concept emphasizes that Bangladesh manages its exchange rate dynamically, deviating from a flexible market system, to achieve specific economic objectives, such as improving export performance. Understanding the relationship between currency devaluation and export performance can assist in evaluating the effectiveness of this non-flexible exchange rate management approach.

➤ *Devaluation of Currency in Bangladesh Context*

The devaluation of currency is a significant economic phenomenon that affects many countries, including Bangladesh. This research has explained some understanding on the relationship between the devaluation of currency and the export performance of Bangladesh. It sheds light on the

<sup>3</sup> Official Exchange Rate - Source: WB data

extent of devaluation of currency related to the export performance of Bangladesh, the reasons for the out-performance of countries with similar economic situations, and how Bangladesh can learn from these better-performing countries. By delving into these issues, Analysis has been made on the intricacies of currency devaluation and its impact on Bangladesh's export sector.

The research provides insights and recommendations to enhance export competitiveness. Valuable findings for industry stakeholders, potential future researchers and academicians interested in understanding the dynamics of currency devaluation and its impact on export performance has been sought throughout the paper.

#### ➤ *Export Performance in Bangladesh*

The export performance of Bangladesh holds immense significance as it contributes substantially to the country's economic growth and development. Bangladesh has gained global recognition for its major export sectors, including garments, jute, fish, and leather. This research delves into the relationship between the devaluation of currency and the export performance in the Bangladesh context, focusing on examining the dynamics of currency devaluation and its impact on the earnings of valuable foreign currency by major export sectors in Bangladesh.

Through an in-depth analysis of the relationship between currency devaluation and export performance, this study sheds light on the potential strategies that Bangladesh can adopt to improve its export competitiveness. By identifying the factors influencing export success in similar economies and studying the lessons learned from these countries, Bangladesh can strive for enhanced performance in diversified sectors and achieve sustainable economic growth.

As a nation heavily reliant on exports, Bangladesh faces a constant challenge to enhance its export performance to stimulate economic growth and alleviate poverty. The exchange rate, particularly its devaluation, plays a pivotal role in shaping the competitiveness of exporters in international markets. Understanding the relationship between currency devaluation and export performance is crucial for policymakers and economists seeking to devise effective strategies for sustainable economic development.

Currency devaluation can affect export performance in multiple ways. On one hand, it may decrease the relative price of exported goods, thereby improving competitiveness and boosting exports. On the other hand, devaluation increases the cost of imported inputs, potentially hindering export production. Assessing the magnitude and significance of this relationship is essential to formulate appropriate policies and interventions, as well as predicting the implications of currency devaluation for the nation's overall economic well-being.

Despite having similar economic situations, some countries like India and Bhutan consistently outperform Bangladesh in terms of export performance. Identifying the factors that contribute to their success can provide valuable

insights into improving export performance for Bangladesh. By examining various economic, institutional, and policy factors, this research uncovers some underlying reasons behind the differential export performance outcomes among comparable countries, offering guidance to enhance its export competitiveness. Fig.3 shows the export performance of Bangladesh with a comparison to the world and India.

The following sectors contribute the major portion of export of Bangladesh.

- *Garments: (Around 85%)*

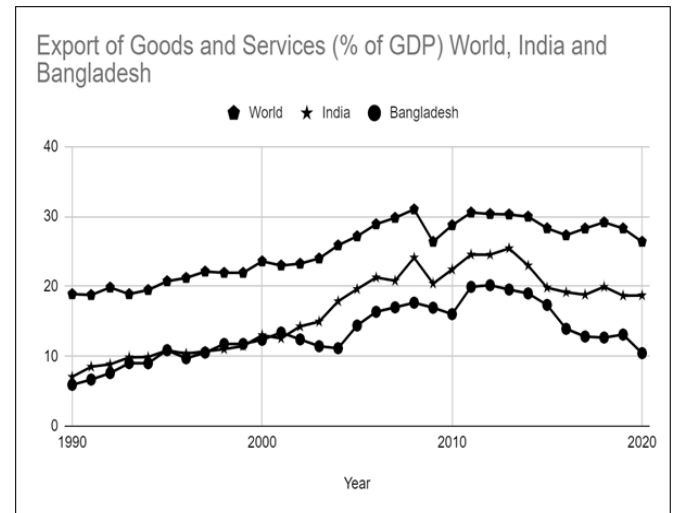


Fig 3 Export of Goods and Services (% of GDP) World, India and Bangladesh  
(Source: WB data)

The garments sector is one of the key drivers of Bangladesh's economy. It primarily includes the production and export of readymade garments, such as clothing, textiles, and apparel. This sector has experienced significant growth over the years, mainly due to low labor and production costs, favorable trade agreements, and increasing demand from global markets.

- *Jute: (Around 0.5%)*

Jute is a natural fiber crop with significant historical importance in Bangladesh. Although the overall contribution to exports is relatively small, the jute sector holds potential for growth and sustainability. Jute exports primarily consist of raw jute, jute goods, and jute-based products. Efforts are being made to explore innovative uses of jute and promote its eco-friendly attributes.

- *Fish: (Around 2%)*

Bangladesh's fish industry plays a vital role in the country's economy, contributing to both domestic consumption and exports. The sector includes both freshwater and marine fish production and exports various fishery products, including frozen fish, shrimp, and prawns. Bangladesh has significant potential for further development in fish processing and value addition to enhance its export performance.

- *Leather: (Around 2%)*

The leather industry in Bangladesh encompasses the production and export of leather goods, footwear, and leather products. Despite challenges related to raw material availability and environmental concerns, the sector has been steadily growing. Efforts are being made to improve the quality of leather and expand marketing channels to boost export performance.

It is important to note that the devaluation of currency can affect the export performance of these sectors in different ways. While it can enhance competitiveness and potentially lead to increased exports, it may also lead to increased import costs for raw materials and inputs, which can affect the profitability and sustainability of these sectors. Therefore, a comprehensive analysis of the devaluation effect needs to consider both the potential benefits and costs across these sectoral compositions of exports in Bangladesh. Fig.4 shows the export performance of Bangladesh with a comparison to the world and Bhutan.

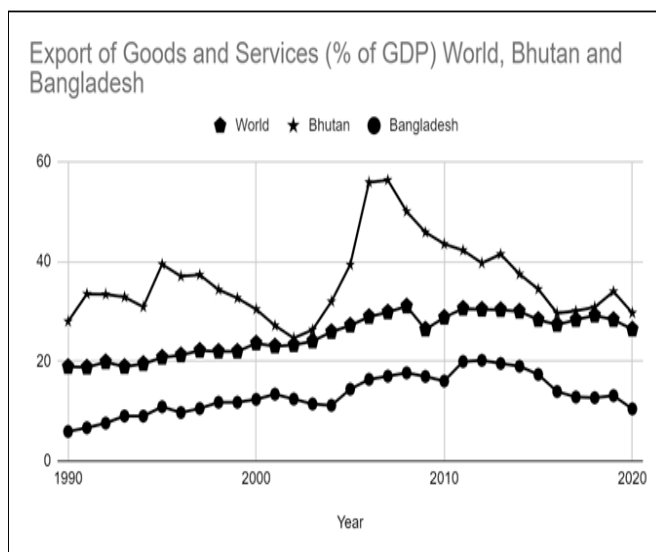


Fig 4 Export of Goods and Services (% of GDP) World, Bhutan and Bangladesh (Source: WB data)

## II. LITERATURE REVIEW

### A. Theoretical Framework

The devaluation of currency is often considered a tool used by countries to stimulate export performance. In the case of Bangladesh, a developing country heavily reliant on exports, understanding the relationship between devaluation and export performance is crucial. For unpacking this crucial issues some related important theories has been analysed.

#### ➤ *The Mundell-Fleming Model*

This model is widely used to analyze the relationship between currency devaluation and export performance. It suggests that devaluation of currency can lead to improvements in export performance by making export goods cheaper for foreign buyers, thus enhancing competitiveness. It also examines factors such as capital mobility, interest rates, and exchange rate expectations to provide insights into the extent of this relationship.

#### ➤ *The Porter's Diamond Model*

This model focuses on understanding the competitive advantage of nations in specific industries. It highlights factors such as factor conditions (e.g., skilled labor, infrastructure), demand conditions (e.g., domestic market size, customer preferences), related and supporting industries, and firm strategy, structure, and rivalry. Analyzing how other countries outperform Bangladesh in specific export sectors using this model can provide valuable insights and lessons for Bangladesh to improve its export performance. The research develops an understanding of related theories.

#### ➤ *The Product Life Cycle Theory*

This theory explores the reasons why countries with similar economic situations may perform better than Bangladesh in terms of export performance. It posits that products go through distinct stages of development, including introduction, growth, maturity, and decline. Countries that excel in certain stages due to factors like innovation, infrastructure, skilled labor, or marketing strategies can outperform others. Understanding this theory can help analyze why some countries with similar economic situations succeed in exporting certain products.

#### ➤ *Exchange Rate Theory*

Exchange rate theory serves as the foundation for analyzing the impact of currency devaluation on a country's export performance. This theory posits that a decrease in the value of a country's currency can boost export competitiveness by making domestic goods relatively cheaper in international markets. The study examines how changes in the exchange rate affect the export performance of Bangladesh.

#### ➤ *Comparative Advantage Theory*

The comparative advantage theory, developed by David Ricardo, explains why some countries perform better in exports compared to others. It suggests that a country should specialize in producing goods and services that it can produce at a lower opportunity cost than other countries. The research delves into the factors that contribute to the comparative advantage of countries with similar economic situations and explore why they outperform Bangladesh.

#### ➤ *Institutional Theory*

Institutional theory focuses on how formal and informal institutions shape economic behaviour and performance. The research examines the institutional factors, such as trade policies, regulations, and governance structures, that may influence export performance. By comparing the institutional frameworks of Bangladesh and countries with better export performance, the study to identifies potential areas for improvement.

#### ➤ *Learning from Best Practices*

The research also incorporates the concept of learning from better-performing countries. By studying the experiences and strategies of countries with successful export performance, Bangladesh can gain insights into the key drivers of their success. This aspect draws upon the theory of knowledge transfer, organizational learning, and adaptive

capacity to understand how Bangladesh can adapt and implement successful strategies from other countries.

By integrating these theoretical frameworks, the research provides a comprehensive analysis of the relationship between currency devaluation and export performance in Bangladesh. The findings may contribute to the existing body of knowledge, helping to make informed decisions to enhance Bangladesh's export performance.

### B. Empirical Studies

Some important empirical contributions to the related literature may be mentioned as follows:

#### ➤ *The Relationship between Devaluation of Currency and Export Performance*

- *Exchange Rate Volatility*

Studies such as Rashid, et al. (2019) and Uddin, et al. (2017) suggest that exchange rate volatility resulting from devaluation adversely affects trade and export performance in Bangladesh. However, Becker (2015) argues that short-term depreciation can initially lead to an increase in exports due to price competitiveness.

- *Price Elasticity and Competitiveness*

Bora et al. (2016) highlight that the low price elasticity of Bangladesh's exports may limit the positive impact of devaluation on export performance. Similarly, Siddiqui and Hasan (2018) argue that structural issues, such as a lack of product diversification and low technological capabilities, can hinder Bangladesh's competitiveness despite devaluation.

- *Macroeconomic Factors*

Ahmed et al. (2014) argue that the effectiveness of devaluation depends on other macroeconomic factors, such as inflation rates, interest rates, and the overall economic stability of the country.

#### ➤ *Factors Influencing Better Performance in Similar Economic Situations*

- *Export Diversification*

Countries with better export performance, such as Vietnam and Malaysia, have actively pursued export diversification strategies (Hakim et al., 2019). By expanding into different markets and sectors, these countries reduce their reliance on a limited number of export goods, thereby ensuring better resilience to external shocks.

- *Productivity and Technology Upgrades*

Successful countries, like China and Singapore, have focused on improving productivity and technological capabilities, enabling them to produce higher-value goods (Khan and Hossain, 2018). These advancements enhance competitiveness in global markets, regardless of exchange rate fluctuations.

- *Institutional Support*

Strong institutions, including legal frameworks, export promotion agencies, and transparent trade policies, play a

crucial role in supporting export-oriented growth (Siddiqui and Islam, 2016). Sri Lanka and Thailand serve as examples where better institutional support has contributed to improved export performance.

#### ➤ *Lessons Bangladesh Can Learn*

- *Diversification Strategy*

Bangladesh can learn from countries like Vietnam and Malaysia and work towards diversifying its export base to reduce vulnerability to global market fluctuations.

- *Technology Upgrades*

Emulating the experiences of China and Singapore, Bangladesh can focus on investing in research and development, promoting innovation, and upgrading its technological capabilities to foster export competitiveness.

- *Institutional Reforms*

By strengthening institutional support, Bangladesh can create an enabling business environment, improve trade facilitation, and provide comprehensive support to exporters.

The literature suggests that the devaluation of currency is not the sole determinant of export performance in Bangladesh. The country faces challenges related to exchange rate volatility, low price elasticity, and structural limitations. To enhance export performance, Bangladesh can learn from countries that have successfully pursued export diversification, improved productivity and technology, and developed strong institutions. Implementing strategic reforms based on these lessons could facilitate sustainable export growth and contribute to Bangladesh's overall economic development.

### III. RESEARCH METHODS

This paper investigates the relationship between the devaluation of currency and export performance in Bangladesh. By incorporating both quantitative and qualitative data, it provides a comprehensive understanding of the factors influencing Bangladesh's export performance.

#### A. Data Sources

A macroeconomic dataset of Bangladesh spanning the time period from 1990 to 2020 has been collected. Secondary datasets from World Bank (WB), International Monetary Fund (IMF), Bangladesh Bank (BB), Export Promotion Bureau (EPB), and Bangladesh Bureau of Statistics (BBS) has been utilized. This dataset includes variables such as currency devaluation, export performance indicators, GDP growth rate, inflation rate, trade policies, and other relevant economic indicators.

Relevant descriptive statistics has been analysed. Regression analysis has been conducted to determine the relationship between currency devaluation and export performance. Additionally, other relevant statistical tests and econometric models has been employed to identify the impact of various factors on exports.

Document analysis can provide valuable insights. To understand why countries with similar economic situations perform better than Bangladesh, I have conducted comparative case studies and examined various factors such as economic policies, trade agreements, infrastructure development, and government support. This analysis can shed light on the specific aspects where Bangladesh lags behind.

To learn from countries that are performing better, I analysed policy documents, reports, and success stories of countries with strong export performance. This can provide insights into best practises, strategies, and policies that Bangladesh can adopt to improve its export performance. Overall, applying document analysis methods helped me better understand the relationship between currency devaluation and export performance in Bangladesh and identify opportunities for improvement.

### B. Sample Design

In-depth interviews has been conducted with key stakeholders in the export sector of Bangladesh, such as government officials, industry experts, exporters, and representatives from relevant trade organizations. These interviews provide insights into the challenges faced by Bangladesh and explore potential solutions.

A comparison with countries of similar economic situations but better export performance has also been conducted. Comparative analysis has been performed focusing on identifying the key factors contributing to their success, such as GDP per capita, trade policies, investment in infrastructure, innovation, and government support.

### C. Description of Variables

#### ➤ Exchange Rate

This variable refers to the rate at which one currency is exchanged for another. In the context of this study, it represents the value of the Bangladeshi currency (taka) relative to other currencies, particularly those of Bangladesh's trading partners. It is used to assess the impact of currency depreciation on export performance. Devaluation is currency is calculated from this variable.

#### ➤ Interest Rate

This variable represents the cost of borrowing money and is an important factor in determining investment levels. In the context of this research, it is relevant to explore how changes in interest rates impact export performance in Bangladesh, as they can influence borrowing costs for exporters and overall investment in export-related activities. Table 2 describes the statistics of lending interest rate (IR) in Bangladesh throughout the sample period.

Table 2 Lending Interest Rate in Bangladesh

Year	Lending Interest Rate	Year	Lending Interest Rate	Year	Lending Interest Rate
1990	14.85	2001	12.82	2011	13.32
1991	14.77	2002	12.61	2012	13.94
1992	13.92	2003	12.04	2013	13.59
1993	13.92	2004	10.40	2014	12.95
1994	13.45	2005	10.62	2015	11.71
1995	12.99	2006	11.66	2016	10.41
1996	12.99	2007	12.64	2017	9.54
1997	12.99	2008	12.89	2018	9.65
1998	12.93	2009	13.33	2019	9.56
1999	13.10	2010	12.22	2020	8.30
2000	12.76				

Source: World Bank<sup>4</sup>

#### ➤ Inflation

This variable refers to the general increase in the prices of goods and services over time. In the context of the study, it is necessary to consider the impact of inflation on export performance, since price changes can affect the competitiveness of exports in international markets.

Inflation is the sustained increase in the general price level of goods and services in an economy over a period of time. In Bangladesh, inflation has been a persistent challenge, often driven by factors such as rising commodity prices, increasing wages, and supply shortages. The government has implemented various measures to control inflation, including monetary policy adjustments, fiscal policy measures, and regulatory interventions.

Bangladesh Bank, manages the exchange rate policy to stabilize the currency. The exchange rate is determined by a combination of market forces and central bank interventions. Inflation can influence currency devaluation in several ways.

Firstly, high inflation erodes the purchasing power of a currency, leading to a decrease in its value relative to other currencies. This can lead to devaluation as the central bank aims to maintain the competitiveness of exports.

Secondly, inflation can put pressure on the central bank to increase interest rates, which can attract foreign capital inflows and strengthen the currency. This, in turn, may lead to a devaluation to support export competitiveness. Table 3 describes the statistics on the inflation rate (IF) in Bangladesh throughout the study period.

<sup>4</sup> Lending rate is the bank rate that usually meets the short- and medium-term financing needs of the private sector. This rate is normally differentiated according to creditworthiness of borrowers and objectives of financing. The terms and conditions attached to these rates differ by country, however, limiting their comparability.

Table 3 Inflation Rate in Bangladesh

Year	Inflation Rate	Year	Inflation Rate	Year	Inflation Rate
1990	6.13	2001	2.01	2011	11.40
1991	6.36	2002	3.33	2012	6.22
1992	3.63	2003	5.67	2013	7.53
1993	3.01	2004	7.59	2014	6.99
1994	5.31	2005	7.05	2015	6.19
1995	10.30	2006	6.77	2016	5.51
1996	2.38	2007	9.11	2017	5.70
1997	5.31	2008	8.90	2018	5.54
1998	8.40	2009	5.42	2019	5.59
1999	6.17	2010	8.13	2020	5.69
2000	2.21				

Source: World Bank<sup>5</sup>

Inflation has a significant positive effect on the devaluation of the Bangladeshi currency. It is found that currency devaluation has a positive impact on export performance (Ahmed et al. 2016). A stable exchange rate is crucial for export growth, as excessive volatility can hinder exporters' ability to plan and make long-term investment decisions. (Uddin and Alam 2015)

General measures for control of inflation are maintaining price stability by implementing effective monetary and fiscal policies to control inflation, ensuring a stable exchange rate regime to provide predictability and reduce uncertainties for exporters, diversifying export products and markets to reduce reliance on specific sectors and countries, enhancing export competitiveness through investments in infrastructure, technology, and skills development.

➤ *Foreign Direct Investment (FDI)*

FDI refers to international investment made by a company (or individual) to establish business operations or acquire assets in a foreign country. In the context of Bangladesh's export performance, examining the role of FDI is important, as it can contribute to technological advancements, production capacity, and access to new markets, all of which can have implications for export growth.

In Bangladesh, FDI has been promoted to attract capital, technology, and expertise in key sectors such as manufacturing, services, and infrastructure development. The government has implemented various policies to improve the investment climate and encourage FDI inflows into the country.

FDI inflows contribute to the foreign exchange reserves of a country, which can strengthen the currency value. This may reduce the need for currency devaluation. FDI can lead

<sup>5</sup> Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.

to an increase in export-oriented industries, which in turn can boost the demand for the country's currency. This increased demand can help to maintain the currency value without devaluation.

FDI can bring in new technologies, capital, and managerial expertise that can enhance the productivity and competitiveness of local firms. This can lead to an increase in export volumes and values. FDI can stimulate the growth of export-oriented industries, such as manufacturing and textiles, by creating backward linkages with domestic suppliers, thereby supporting export growth.

Rashid et al. (2018) found that FDI has a positive impact on export performance in Bangladesh. They discovered that FDI inflows stimulate increased export-oriented activities, contributing to export growth. Chowdhury et al. (2020) investigated the impact of FDI on currency devaluation in Bangladesh. They found that FDI inflows significantly affect the exchange rate, as increased foreign investment leads to higher demand for the domestic currency, potentially preventing or mitigating currency devaluation. Table 4 describes the statistics (log value) of Foreign Direct Investment (FDI) in Bangladesh throughout the sample period.

Table 4 Foreign Direct Investment (FDI) in Bangladesh

Year	FDI	Year	FDI	Year	FDI
1990	0.010	2001	0.145	2011	0.983
1991	0.004	2002	0.096	2012	1.188
1992	0.012	2003	0.446	2013	1.735
1993	0.042	2004	0.689	2014	1.469
1994	0.033	2005	1.171	2015	1.451
1995	0.005	2006	0.636	2016	0.879
1996	0.029	2007	0.818	2017	0.616
1997	0.289	2008	1.450	2018	0.754
1998	0.380	2009	0.879	2019	0.543
1999	0.350	2010	1.069	2020	0.408
2000	0.525				

Source: World Bank (log value)<sup>6</sup>

Policymakers usually deals with various measures such as encouraging and facilitating foreign direct investment in export-oriented industries, implementing policies that promote technology transfer and knowledge spillovers from foreign investors to domestic firms, strengthening institutional frameworks to protect the rights and interests of foreign investors, developing strategies to diversify FDI

<sup>6</sup> Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors, and is divided by GDP.



sources to reduce dependency on specific countries or regions.

➤ *Balance of Payments (BoP)*

BoP represents the record of a country's economic transactions with the rest of the world over a specific period. It includes the current account (exports, imports, and other payments) and capital and financial account (investments and loans). BoP is a useful variable in assessing how changes in currency devaluation and other factors impact the overall balance of trade, which in turn can affect export performance.

The BoP consists of the current account, capital account, and financial account. In Bangladesh, the BoP is affected by factors such as exports, imports, remittances, foreign direct investment, and international financial transactions. The BoP provides important information about a country's external trade and financial relationships, as well as the overall balance between inflows and outflows of foreign exchange.

A persistent current account deficit (excess of imports over exports) can put pressure on the domestic currency, potentially leading to devaluation. This is because a deficit suggests that more foreign currency is being demanded for imports than earned from exports, creating downward pressure on the currency value. A surplus in the financial account (inflows of foreign investment) can strengthen the currency, potentially reducing the need for devaluation.

A favorable balance of payments, characterized by a surplus in the current account and inflows of foreign investment, can support export growth. A surplus in the current account indicates that a country is exporting more than it imports, leading to increased export revenues and a favorable trade balance. Additionally, foreign investment can contribute to the development of export-oriented industries and enhance the competitiveness of domestic firms.

Islam et al. (2019) found that a surplus in the current account positively influences export performance in Bangladesh. They concluded that maintaining a favorable current account balance is crucial for sustained export growth. Bhattacharya and Hayakawa (2019) investigated the impact of foreign direct investment on export performance in Bangladesh. They found a positive relationship between foreign investment inflows and export growth, indicating that the BoP plays a role in supporting export performance through attracting foreign investment. Table 5 describes the statistics (log value) of Balance of Payments (BoP) in Bangladesh throughout the sample period.

Table 5 Balance of Payments (BoP) in Bangladesh

Year	BoP	Year	BoP	Year	BoP
1990	19.23	2001	(-)ve	2011	(-)ve
1991	19.89	2002	20.02	2012	21.99
1992	20.27	2003	20.61	2013	22.39
1993	20.36	2004	20.04	2014	22.24
1994	20.35	2005	(-)ve	2015	22.41
1995	(-)ve	2006	20.58	2016	22.35

1996	(-)ve	2007	21.04	2017	20.26
1997	(-)ve	2008	21.74	2018	(-)ve
1998	19.48	2009	22.19	2019	20.27
1999	(-)ve	2010	20.74	2020	20.95
2000	(-)ve				

Source: World Bank (log value)<sup>7</sup>

Steps regarding BoP are promoting export-oriented industries and diversifying export markets to improve the current account balance, implementing policies that attract foreign direct investment to enhance export competitiveness and support export-oriented industries, enhancing export promotion and marketing efforts to increase export volumes and values, monitoring and managing capital flows to maintain a balanced and sustainable BoP position.

➤ *GDP Per Capita*

This variable represents the economic output (Gross Domestic Product) per person in a country. In the context of this research, it is relevant to consider the relationship between GDP per capita and export performance, as a higher GDP per capita can indicate increased purchasing power and potentially higher demand for imports, thus impacting export opportunities.

These variables helps in investigating the extent to which currency devaluation is related to Bangladesh's export performance and identifying other factors that contribute to export performance beyond just currency devaluation. Table 6 describes the statistics of GDP per capita in Bangladesh throughout the sample period.

Table 6 GDP per Capita in Bangladesh

Year	GDP per capita	Year	GDP per capita	Year	GDP per capita
1990	294.90	2001	410.05	2011	856.38
1991	283.38	2002	407.96	2012	876.82
1992	284.97	2003	440.71	2013	973.77
1993	292.43	2004	469.12	2014	1108.51
1994	292.08	2005	492.81	2015	1236.00
1995	322.09	2006	503.54	2016	1659.96
1996	387.38	2007	552.34	2017	1815.61
1997	395.32	2008	630.11	2018	1963.41
1998	401.97	2009	698.52	2019	2122.08
1999	404.49	2010	776.86	2020	2233.31

<sup>7</sup> Reserves and related items is the net change in a country's holdings of international reserves resulting from transactions on the current, capital, and financial accounts. Reserve assets are those external assets that are readily available to and controlled by monetary authorities for meeting balance of payments financing needs, and include holdings of monetary gold, special drawing rights (SDRs), reserve position in the International Monetary Fund (IMF), and other reserve assets. Also included are net credit and loans from the IMF (excluding reserve position) and total exceptional financing. Data are in current U.S. dollars.

2000	413.10				
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Source: World Bank<sup>8</sup>

**D. Model Specifications**

Both quantitative and qualitative approaches has been utilized. For the quantitative model, following equations has been developed using the proposed variables.

➤ *The Dependent Variable:*

Export Performance (EP)

➤ *Independent Variable:*

Exchange Rate (ER), Interest Rate (IR), Inflation (IF), Foreign Direct Investment (FDI), Balance of Payment (BoP), GDP Growth Rate, and other observed variables has been described with convenient notation.

For developing equation Export Performance has been assumed to be the function of other variables.

Export Performance (EP) = f {Exchange Rate, Interest rate, Inflation, Foreign Direct Investment, Balance of Payment, GDP Per Capita}

➤ *Equation for Regression Analysis:*

$$\text{Export Performance (Y)} = \beta_1 + \beta_2(\text{Exchange Rate}) + \beta_3(\text{Interest rate}) + \beta_4(\text{Inflation})$$

$$+ \beta_5(\text{Foreign Direct Investment}) + \beta_6(\text{Balance of Payment}) + \beta_7(\text{GDP Per capita}) + \epsilon$$

I have used the tools such as indepth interviews, expert interviews, semi-structured interviews, focused group discussion, document analysis, comparative analysis etc. for qualitative analysis.

The findings from the quantitative and qualitative data has been compared and triangulated to provide a comprehensive understanding of the relationship between currency devaluation and export performance in Bangladesh. Based on the combined findings, policy recommendations has been formulated to enhance Bangladesh's export performance. These recommendations has been drawn on best practices identified through the comparative analysis with better-performing countries.

By combining quantitative and qualitative methods, this mixed methodology research sheds light on the relationship between currency devaluation and export performance in Bangladesh. The findings not only establishes the extent of this relationship but also explore why some countries with similar economic situations performing better. Furthermore,

<sup>8</sup> (GDP per capita is gross domestic product divided by midyear population. GDP 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 current U.S. dollars.)

the study provides actionable recommendations for Bangladesh to learn from these countries and improve its export performance.

**IV. RESULTS AND DISCUSSION**

The results have explored a general overview of intriguing multi-directional conclusions. The export performance has been found to have no significant relationship with the devaluation of currency. The export value index as percentage of GDP and percentage of devaluation was accounted for analysing the relationship. Fig.5 shows the trend of export performance against changes in devaluation.

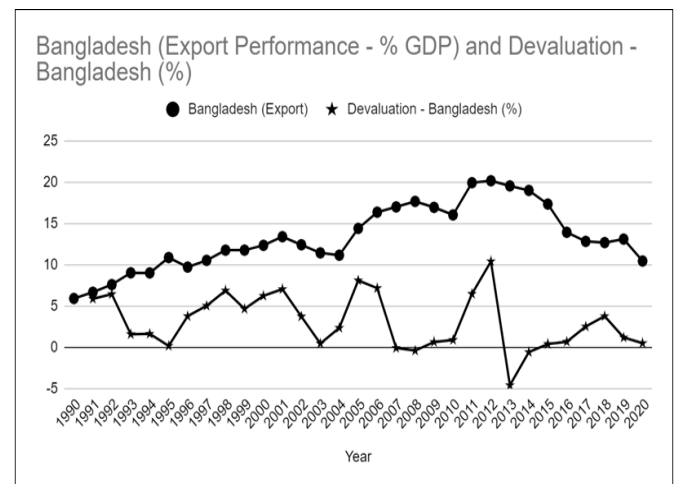


Fig 5 Devaluation and Export Performance in Bangladesh<sup>9</sup>

The volatility of currency devaluation has been measured using deviation which provide a quantifiable representation of the fluctuations in the value of the Bangladeshi Taka against major international currency, US Dollar over the selected period. A correlation analysis assesses the strength and direction of the relationship and provide insights into how changes in currency value have influenced the country's export sector.

The purpose behind devaluation is often multifaceted. One primary objective is to make a country's exports more competitive in international markets. When a currency is devalued, it becomes relatively cheaper compared to other currencies. As a result, the prices of exported goods decrease, making them more attractive to foreign buyers. This can potentially lead to an increase in export volumes, boost revenue from exports, and improve the overall export performance of a country.

➤ *Fluctuations of Devaluation*

The differential of data of devaluation provides the following graph. Log value of the percentage of devaluation were used in STATA for getting the stationary nature of the devaluation. Upto 5<sup>th</sup> difference observation has been used to get the estimation for devaluation.

<sup>9</sup> Source: Author's calculation from World Bank data. Log value of Export Value Index and log value of percentage of devaluation of taka has been used

The data provide insights into how fluctuations in the value of the Bangladeshi currency (Taka) have affected the country's export sector during the sample period. World Bank, International Monetary Fund (IMF), Bangladesh Bank, and Bangladesh Bureau of Statistics provide comprehensive and accurate macroeconomic data on currency exchange rates and export performance.

A time-series analysis has been performed to identify any patterns or trends. This analysis includes techniques such as trend analysis and time-series decomposition to understand the underlying patterns and dynamics. STATA has been utilized to conduct the data analysis, perform statistical tests, and visualize the results. These tools offer a wide range of functions and libraries specifically designed for data analysis and time-series modelling. Fig 6 depicts the nature of volatility of percentage of devaluation over time.

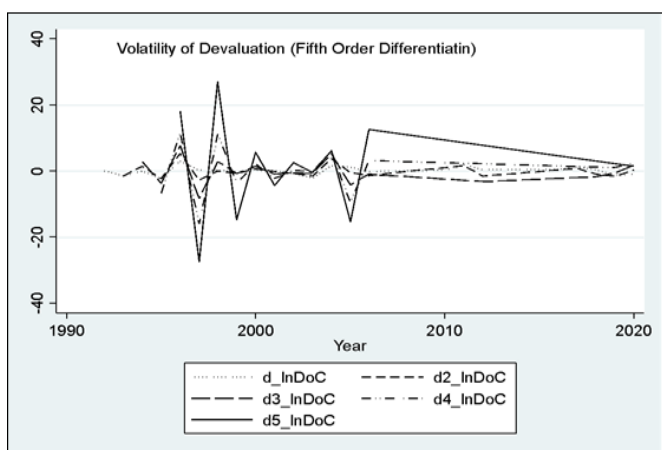


Fig 6 Stationary Nature of Devaluation in Bangladesh<sup>10</sup>

➤ *Fluctuations of Exchange Rate*

The nominal exchange rate, real exchange rate, exchange rate on PPP basis also shows the parallel trend with the export performance indicating no significant influence on it. Fig.7 shows the trend of export performance with respect to different types of exchange rate over the sample period.

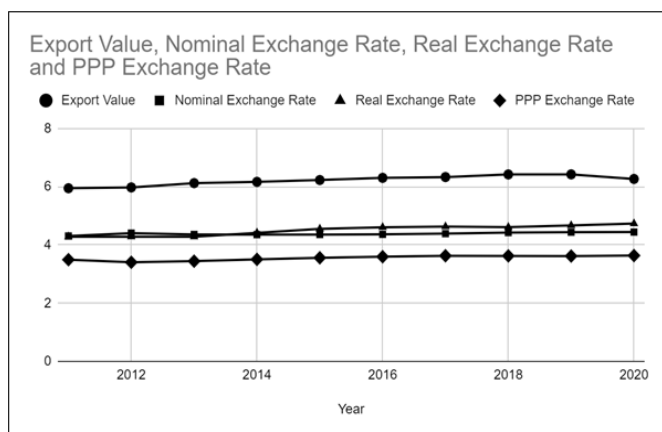


Fig 7 Export Performance and Types of Exchange Rate<sup>11</sup>

<sup>10</sup> Source: Authors calculation on STATA software from World Bank Data.

Historical data on currency devaluation events, government policies, and their effects on export performance has been analysed. Key indicators include the Official Exchange Rate Index (ERI) and Real Nominal Exchange Rate. A mixed-methods approach involving quantitative data analysis and literature review primarily focuses on examining exchange rate data, currency devaluation trends, and export performance indicators over a specific period. Additionally, academic studies, reports, and expert opinions related to the subject matter has been consulted.

Export performance indicators, such as total export value, sector-specific exports, and foreign exchange earnings, have been analysed alongside exchange rate fluctuations and currency devaluation. Fig.8 depicts the nature of volatility of log value of nominal exchange rate over time.

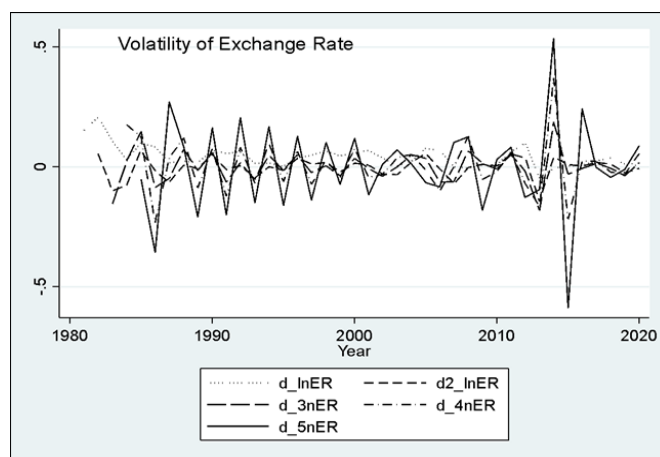


Fig 8 Stationary Nature of Exchange Rate in Bangladesh

➤ *Responses to Major Fluctuations*

Statistical techniques, such as regression analysis, correlation analysis, and time series analysis, has been tried to establish relationships between exchange rate fluctuations, currency devaluation, and export performance. Through the analysis of exchange rate fluctuations, currency devaluation, and export performance data, this study has attempted to uncover the relationship between these factors in Bangladesh. By referencing academic studies, reports, and expert opinions, this analysis strives to provide insights into the dynamics influencing the country's export sector. Table 7 describes major policy response towards devaluation.

Table 7 Major Devaluation in Bangladesh

Year	Devaluation (%)	Reason / Response
1991	16	as part of its economic reforms aimed at addressing the balance of payments crisis
1996	7	to reduce the trade deficit and promote export competitiveness

<sup>11</sup> Source: Author's calculation from World Bank data. Log value of Export Value Index and log value of nominal exchange rate, real exchange rate and ppp exchange rate has been used.

2001	7	to address the trade imbalance and boost exports
2003	3	to stabilize the exchange rate and support export-oriented industries
2009	4	to counterbalance the impact of the global economic recession and bolster exports
2011	1	to help boost exports and improve the competitiveness of Bangladesh's products in international markets
2013	4.7	to counteract the impact of a depreciating Indian rupee and maintain export competitiveness
2015	1.3	to stabilize the exchange rate following significant fluctuations in regional currencies
2019	2.3	to support export-oriented industries and enhance competitiveness
2020	3	response to the COVID-19 pandemic

(Devaluation as a Measure of Policy Reform)

➤ *Interest Rate Responses*

Devaluation of currency along with co-integration effect of interest rate, and many other macroeconomic variables are not strictly conclusive to any stationary figure. This study has also found an inverse relationship between interest rate and export performance as the entrepreneurs are mostly dependant on bank financing for export credit line as demonstrated in the following figure. (Fig.9)

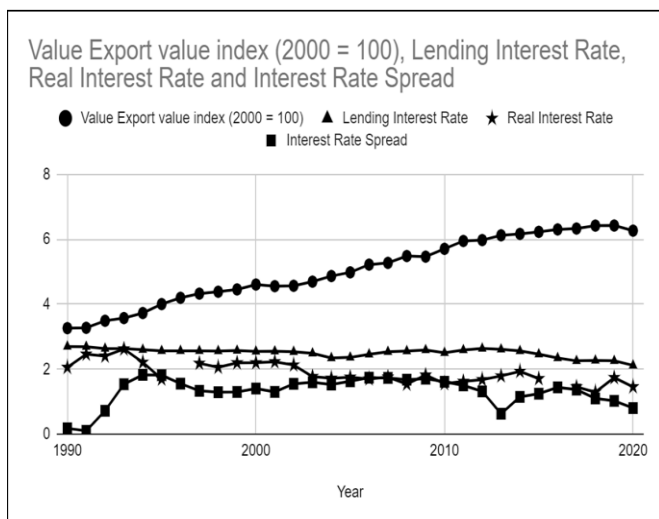


Fig 9 Export Performance and Interest Rates in Bangladesh

The decomposition of the lending rate vividly shows the trend of the relationship between the interest rate and export performance. The following figure shows that export performance increases when the interest rate shows a downward trend. (Fig.10)

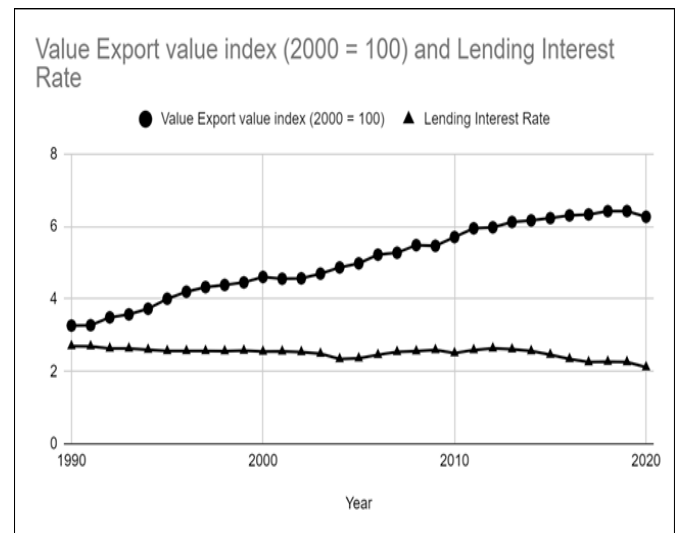


Fig 10 Export Performance and Lending Interest Rate

➤ *Responses to GDP Per Capita*

Some results has been found that devaluation of currency along with co-integration effect of interest rate, inflation, foreign direct investment, balance of payments and GDP per capita has found no significant impact on Bangladesh's export performance, suggesting that other factors may play a more significant role. A sample decomposition of GDP per capita is shown in Fig, 11 below.

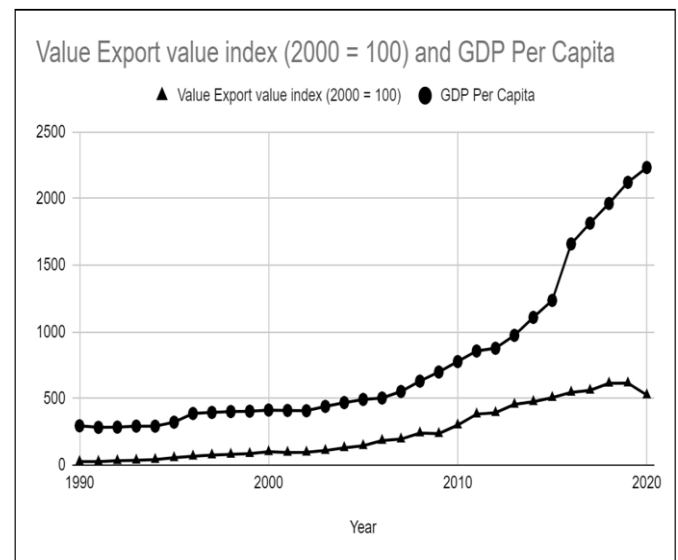


Fig 11 Export Performance and GDP per Capita

➤ *Co-integration of Variables and Processes in Exchange Rate Pass-Through*

The process of currency devaluation involves various steps and methods that are typically undertaken by the central bank or monetary authority of a country. The specific processes and methods of currency devaluation include:

The central bank or monetary authority decides to devalue the currency, typically in response to economic factors such as trade imbalances, inflation, or the need to boost exports. This decision is often made after careful analysis and consultation with relevant stakeholders. The central bank then announces the decision to the public and financial markets.

Once the decision is announced, the central bank adjusts the exchange rate of the currency against other currencies. This adjustment can be done through a fixed exchange rate system, where the central bank directly sets the new exchange rate, or through a managed float system, where the exchange rate is adjusted based on market forces within certain predetermined limits.

In some cases, the central bank may intervene in the foreign exchange market to actively buy or sell its own currency. By purchasing its currency in the market, the central bank aims to increase the demand and raise its value. Conversely, it can sell its currency to reduce its value.

The central bank may also use various monetary policy tools alongside currency devaluation to support the process. These tools can include adjusting interest rates, reserve requirements, or implementing open market operations to influence liquidity in the economy and manage the impact of devaluation on inflation and other macroeconomic variables.

Throughout the devaluation process, clear communication and transparency are crucial. The central bank often provides regular updates, guidance, and explanations to ensure stakeholders, including businesses, investors, and the public, understand the rationale, goals, and potential implications of the devaluation.

The determinants can include economic factors such as inflation rates, interest rates, and balance of payments, as well as external factors such as global market conditions and trade policies. This study investigates the influence of both internal and external factors on exchange rate movements. Internal factors can include changes in domestic economic conditions, government policies, and political stability, while external factors can include global economic developments, commodity prices, and capital flows. (Fig.12)

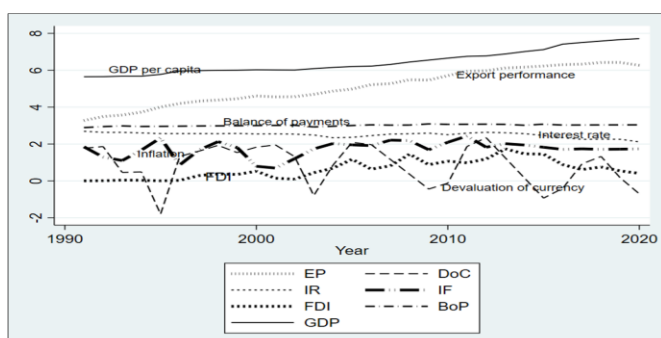


Fig 12 Export Performance and Co-Integration of Variables<sup>12</sup>

<sup>12</sup> Sample variables includes Devaluation of currency, Interest Rate, Inflation, Foreign Direct Investment, Balance

➤ *Countries with Similar Responses to Devaluation*

The specific processes and methods of currency devaluation can vary depending on the country, its exchange rate regime, and the prevailing economic conditions. Additionally, implementing currency devaluation requires careful evaluation of potential risks and coordination with other policy measures to ensure overall stability and achieve desired outcomes.

Countries with similar economic situations such as India and Bhutan may have implemented more effective economic policies, such as diversification of exports, investment in infrastructure, or targeted support for industries, leading to better export performance.

Better-performing countries may have higher levels of productivity compared to Bangladesh, which allows them to manufacture and export goods more efficiently and competitively.

Better performing countries may have access to advantageous trade agreements or preferential trade arrangements that provide them with better market access and lower trade barriers.

➤ *Regression Estimations with Proposed Equation*

The regression run according to the equation proposed in methodology provides the following estimation. The estimation also shows that there is no significant relationship between exchange rate and export performance. Fig.13 shows the Regression estimation of Export Performance with respect to Exchange Rate, Interest Rate, Inflation, Foreign Direct Investment, Balance of Payment and GDP per capita in a tabular form.

. reg EP ER IR IF FDI BoP GDP						
Source	SS	df	MS	Number of obs	= 17	
Model	18.1948511	6	3.03247519	F(6, 10)	= 424.10	
Residual	.071503588	10	.007150359	Prob > F	= 0.0000	
				R-squared	= 0.9961	
				Adj R-squared	= 0.9937	
Total	18.2663547	16	1.14164717	Root MSE	= .08456	
EP	Coefficient	Std. err.	t	P> t	[95% conf. interval]	
ER	1.895929	.2637064	7.19	0.000	1.308355	2.483504
IR	-.2098298	.3967368	-0.53	0.608	-1.093814	.6741548
IF	-.0276561	.1054849	-0.26	0.799	-.2626911	.2073789
FDI	.3611458	.1130886	3.19	0.010	.1091688	.6131228
BoP	.0298592	.0369743	0.81	0.438	-.0525246	.1122431
GDP	.5227085	.1059269	4.93	0.001	.2866887	.7587283
_cons	-6.357583	1.860256	-3.42	0.007	-10.50249	-2.212674

Fig 13 Regression Estimation of Export Performance with Exchange Rate and other Variables

of Payments (loglogvalue) GDP Per Capita (Source: Author's Calculation from World Bank Data)

From the regression estimation, the proposed equation can be rewritten as follows:

$$\text{Export Performance (Y)} = \beta_1 + \beta_2(\text{Exchange Rate}) + \beta_3(\text{Interest rate}) + \beta_4(\text{Inflation}) + \beta_5(\text{Foreign Direct Investment}) + \beta_6(\text{Balance of Payment}) + \beta_7(\text{GDP Per capita}) + \epsilon$$

$$\text{Export Performance (EP)} = -6,36 + 1.90 \text{ Exchange Rate (ER)} - 0.21 \text{ Interest Rate (IR)} - 0.03 \text{ Inflation (IF)} + 0.36 \text{ Foreign Direct Investment (FDI)} + 0.03 \text{ Balance of Payment (BoP)} + 0.52 \text{ GDP Per Capita} + \epsilon$$

If we run the regression with devaluation of currency instead of mere nominal exchange rate the STATA provides the following estimation. In this case the equation can be expressed as-

$$\text{Export Performance (EP)} = 3.65 + 0.06 \text{ Devaluation of Currency (DoC)} - 2.19 \text{ Interest Rate (IR)} - 0.02 \text{ Inflation (IF)} + 1.01 \text{ Foreign Direct Investment (FDI)} + 0.15 \text{ Balance of Payment (BoP)} + 0.51 \text{ GDP Per Capita} + \epsilon$$

Fig.14 shows the regression estimation of Export Performance with respect to Devaluation, Interest Rate, Inflation, Foreign Direct Investment, Balance of Payment and GDP per capita in a tabular form.

. reg EP DoC IR IF FDI BoP GDP						
Source	SS	df	MS	Number of obs	=	13
Model	15.3956497	6	2.56594161	F(6, 6)	=	50.99
Residual	.301957087	6	.050326181	Prob > F	=	0.0001
				R-squared	=	0.9808
				Adj R-squared	=	0.9615
Total	15.6976067	12	1.3081339	Root MSE	=	.22433

EP	Coefficient	Std. err.	t	P> t	[95% conf. interval]
DoC	.0625454	.0723268	0.86	0.420	-1.144318 .2395226
IR	-2.188428	1.15559	-1.89	0.107	-5.016055 .6391994
IF	-.0172331	.3371475	-0.05	0.961	-.8422032 .8077371
FDI	1.012506	.4033904	2.51	0.046	.0254449 1.999566
BoP	.1458469	.103025	1.42	0.207	-.1062462 .39794
GDP	.512984	.3128735	1.64	0.152	-.2525899 1.278558
_cons	3.654884	5.417893	0.67	0.525	-9.602224 16.91199

Fig 14 Regression Estimation of Export Performance with Devaluation of Current and other Variables

➤ *The Mundell-Fleming Model*

This model is widely used to analyze the relationship between currency devaluation and export performance. It suggests that devaluation of currency can lead to improvements in export performance by making export goods cheaper for foreign buyers, thus enhancing competitiveness. It also examines factors such as capital mobility, interest rates, and exchange rate expectations to provide insights into the extent of this relationship.

• *The IS-LM-BP Curve*

It is necessary to make distinctions between perfect and imperfect capital mobility, as well as fixed and flexible exchange rates, in the model. In each of these situations, it may be observed what happens to the economy when both an expansionary monetary and fiscal policy is implemented. It may be observed through Mundell's model, which is concerned with complete mobility. Following that, it may also be observed at Fleming's imperfect mobility model.

Investment is not continuous and is primarily determined by two factors: the volume of sales and interest rates. If a company's sales expand, it will need to invest in new manufacturing plants to enhance output; this is a positive relationship. In terms of interest rates, the higher they are, the more expensive investments become, resulting in a negative link between interest rates and investment.

The IS<sup>13</sup> curve is obtained by keeping in mind the equivalence between production and demand, which establishes the equilibrium in the products market, and observing the effect of interest rates. For each interest rate, this curve reflects the value of equilibrium.

An increase in interest rates will reduce output due to the effect on investment. The link between liquidity and money is represented by the LM<sup>14</sup> curve. The interest rate in an open economy is determined by the equilibrium of supply and demand for money:  $M/P=L(i,Y)$ , where M is the amount of money supplied, Y is real income, and i is the real interest rate, and L is the demand for money, which is a function of i and Y. Furthermore, the exchange rate must be examined since it influences money demand (investors may opt to purchase or sell bonds in a country based on the exchange rate).

The money market's equilibrium indicates that, given the amount of money, the interest rate is an increasing function of output level. When output rises, so does the demand for money, but as previously stated, the money supply is fixed. As a result, interest rates should climb until the opposing impacts on money demand are neutralized; people will desire more money due to higher income and less due to rising interest rates.

• *The Mundell Trilemma*

The Mundell–Fleming model has been used to argue that an economy cannot simultaneously maintain a fixed exchange rate, free capital movement, and an independent monetary policy. An economy can only maintain two of the three at the same time (Fig.15).

<sup>13</sup> The IS Curve represents various combinations of interest and income along which the goods market is in equilibrium.

<sup>14</sup> The LM curve shows the combinations of interest rates and levels of real income for which the money market is in equilibrium.

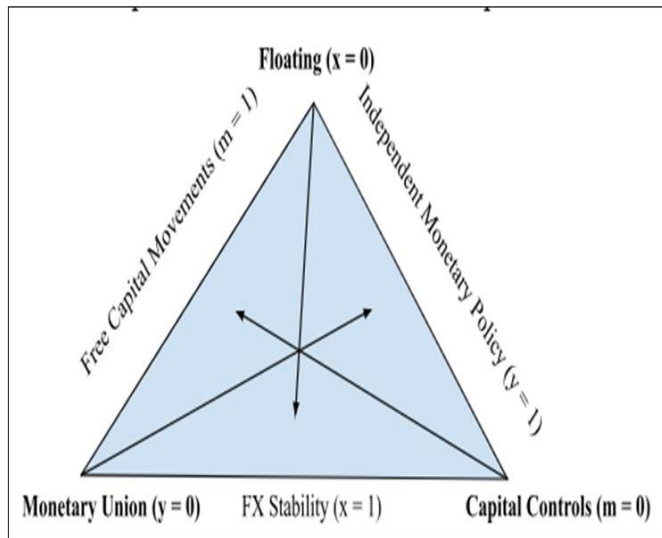


Fig 15 The Trilemma Triangle

The Mundell-Fleming model is an immensely helpful tool for analyzing open economies. Many textbooks and papers argue for and against each of these models. However, there is no denying that the world is moving toward liberalizing international commerce and capital flows (mostly through WTO accords), which would lead us to concur with Mundell. Monetary policy will only operate with flexible exchange rates under perfect capital mobility, but fiscal policy will only work with fixed exchange rates.

➤ *The Porter's Diamond Model*

This model focuses on understanding the competitive advantage of nations in specific industries. It highlights factors such as factor conditions (e.g., skilled labor, infrastructure), demand conditions (e.g., domestic market size, customer preferences), related and supporting industries, and firm strategy, structure, and rivalry. Analyzing how other

countries outperform Bangladesh in specific export sectors using this model can provide valuable insights and lessons for Bangladesh to improve its export performance. Fig.16 shows the Porter's diamond model of comparative advantage.

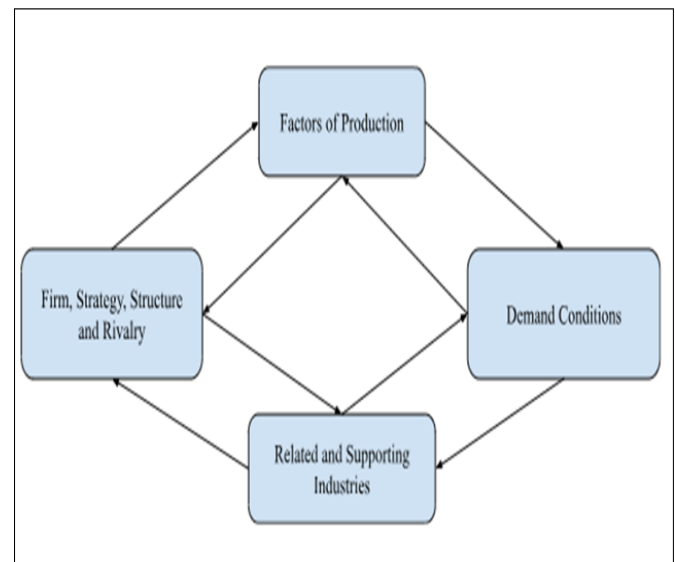


Fig 16 Determinants of the National Advantage

Michael Porter developed the diamond theory of national advantage, which claims that the characteristics of one's native country are critical for an organization's success in worldwide markets. This theory is known as the diamond hypothesis because it is shown as a diamond framework. It outlines the variables that lead to the success of global organizations. These are known as the determinants of national advantage. Table 8 describes some of the empirical studies which are multi-directional in nature.

Table 8 A Brief Summary of Related Studies.

Authors and date	Variable used	Country, coverage and method	Findings
Duasa, 2009	Volume of exports and imports, REER <sup>15</sup> (Real Effective Exchange Rate), and trade balance	Malaysia; annual data (1999–2006); TAR and M-TAR	A long-run asymmetric cointegration exists between REER and exports
Babatunde, 2009	Merchandise exports, REER, average tariff rate, exchange rate, and imports of raw materia	Sub-Saharan Africa; annual data (1980–2005); panel-fixed effect and random effect	REER stimulates exports
Njong, 2008	Real exports, real GDP, REER, import over total international trade, export over total international trade, lag exports, and lag FDI stock	Cameroon; annual data (1980–2003); AR (p)	FDI and REER significantly influence exports
Sahoo, 2006	FDI, world income growth, infrastructure index, domestic	Bangladesh, India, Pakistan, Sri Lanka, and Nepal; annual data	FDI positively influences exports

<sup>15</sup> Real effective exchange rate is the nominal effective exchange rate (a measure of the value of a currency against a weighted average of several foreign currencies) divided by a price deflator or index of costs.

	demand, exports, REER, and GDP growth	(1975–2003); panel-fixed effect	
Arize, 1995	Log real exports, log REER, and log real foreign income	USA; monthly data (1971 : 2–1991 : 3); error correction, ARCH, and linear moment	(i) A long-run equilibrium relationship exists. (ii) Exchange rates and exports are negatively associated

Source: Bishnu Kumar Adhikary (2012)

### V. LIMITATIONS

The study uses secondary data collected from various sources, which may have inherent limitations and inconsistencies. Additionally, other factors and the multiple cointegrations beyond currency devaluation may influence export performance, such as global economic conditions, government policies, and trade agreements.

The intertwined intriguing nature of the direction of impact of valuation factor of currency has reminded me the discussion of money - the conduits and way of money to the public use which has been remarkably mentioned by Hobbes with a chapter titled “ of the nutrition, and procreation of a commonwealth”

“By concoction, I understand the reducing of all commodities which are not presently consumed, but reserved for nourishment in time to come, to something of equal value, and withal so portable as not to hinder the motion of men from place to place; to the end a man may have in what place soever such nourishment as the place affordeth. And this is nothing else but gold, and silver, and money. For gold and silver, being, as it happens, almost in all countries of the world highly valued, is a commodious measure of the value of all things else between nations; and money, of what matter soever coined by the sovereign of a Commonwealth, is a sufficient measure of the value of all things else between the subjects of that Commonwealth. By the means of which measures all commodities, movable and immovable, are made to accompany a man to all places of his resort, within and without the place of his ordinary residence; and the same passeth from man to man within the Commonwealth, and goes round about, nourishing, as it passeth, every part thereof; in so much as this concoction is, as it were, the sanguification of the Commonwealth: for natural blood is in like manner made of the fruits of the earth; and, circulating, nourisheth by the way every member of the body of man.” (Leviathan, Thomas Hobbes).

### VI. CONCLUDING REMARKS

The findings of the research provides policy recommendations for Bangladesh, based on the strategies and practices employed by better-performing countries, such as improving infrastructure, enhancing export promotion programs, or boosting investment in research and development instead of expecting maximization of gain

from the intervention on devaluation of currency as a standalone factor.

It identifies opportunities for collaboration and knowledge sharing between Bangladesh and better-performing countries, such as exchange programs, joint ventures, or technical assistance, to enhance export performance. In the context of this research, one relevant aspect is examining the lessons that Bangladesh can learn from India regarding garments export. Since both countries have a significant presence in the global garments market, studying India's experience could provide valuable insights for Bangladesh.

India has been successful in expanding its garments export industry over the years. By analyzing India's strategies, policies, and measures taken to enhance its garments export performance, Bangladesh can gain valuable insight into improving its own export performance. This could include understanding the impact of currency devaluation on India's garments export and identifying any specific policies or initiatives that have contributed to India's success.

By studying India's experience in the garments export sector, Bangladesh may be able to identify potential areas of improvement in its own strategies. For instance, analyzing India's marketing approaches, supply chain management, trade agreements, and investment in technological advancements can help Bangladesh develop a more robust and competitive garments export industry. It is essential to examine the lessons that the country can learn from India's experience in garments export. Studying India's successes and best practices can provide valuable insights to help Bangladesh improve its export performance in the garments sector.

Bangladesh can learn several lessons from Bhutan to enhance its export performance. Bhutan, despite being a small landlocked country with limited resources, has implemented certain strategies that have contributed to its successful export growth. Here are some key lessons that Bangladesh can learn.

Bhutan has focused on diversifying its export basket by expanding beyond traditional sectors. Bangladesh can follow suit by promoting the development of non-traditional export sectors to reduce reliance on a few products, such as the ready-made garments industry. Exploring new sectors



with export potential can enhance Bangladesh's resilience to market fluctuations. Bhutan emphasizes value addition to its exports by focusing on quality and unique selling propositions. Bangladesh can aim to enhance the value of its products by improving standards, design, innovation, and branding. This shift towards value-added exports can help increase price competitiveness and capture higher-value markets.

Bhutan has invested in improving trade facilitation measures, such as simplifying customs procedures and reducing trade barriers. Bangladesh can enhance its export competitiveness by streamlining bureaucratic processes, reducing red tape, and improving logistics infrastructure to ensure efficient movement of goods. Bhutan has actively pursued regional economic integration by becoming a member of regional trade agreements like the South Asian Free Trade Area (SAFTA). Bangladesh can further leverage its existing regional integration initiatives, such as the South Asian Association for Regional Cooperation (SAARC) and the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), to enhance export opportunities in neighbouring markets.

Bhutan has embraced a sustainable and green approach to exports, emphasizing environmental conservation and social responsibility. Bangladesh can learn from this example by promoting sustainable production practices, reducing environmental impacts, and implementing fair labour practices. This can enhance the country's image and attract ethical and conscious consumers globally.

Bhutan has implemented policies and programs that provide support to export-oriented industries, including export promotion schemes and financial incentives. Bangladesh should continue to foster an enabling environment through policy interventions, targeted subsidies, and capacity-building programs to boost export competitiveness.

By studying Bhutan's successful export strategies, Bangladesh can identify viable approaches to enhance its own export performance. It is essential to adapt these lessons to Bangladesh's specific context and develop a comprehensive export enhancement strategy that aligns with the country's unique strengths and market opportunities.

Currency depreciation and its influence on export performance are key issues for emerging nations such as Bangladesh. From a macroeconomic standpoint, this paper investigated the relationship between currency depreciation and export performance in Bangladesh, focusing on aggregate data from major export sectors such as ready-made garments, jute, jute products, fish, shrimp, leather, and leather products. The study intended to ascertain the extent to which currency depreciation influences the export performance of various industries, as well as to investigate why nations with comparable economic conditions outperform Bangladesh. The findings led to the conclusion that currency depreciation (DoC) caused by exchange rate volatility (ER) is not the only factor influencing export

performance. The co-integration of many other parameters, such as interest rate (IR), inflation (IF), and so on.

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