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International Trade, FDI, Inflation and Growth Nexus: Bangladesh Perspective (1971-2016)

Uluslararası Ticaret, DYY, Enflasyon ve Büyüme Bağlantı Noktası: Bangladeş Perspektifi (1971-2016)

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ÖZ

Bu çalışmanın amacı, Bangladeş'in ekonomik büyümesi üzerinde önemli etkisi olan ana faktörleri incelemektir. Dünya çapında birçok çalışma, farklı ülkelerin ekonomik büyümesini etkileyen faktörleri bulmaya çalışmaktadır. Ancak Bangladeş için literatürde çok az araştırma mevcuttur. Ekonomik büyümenin ana faktörlerini gözlemlemek için, 1971'den 2016'ya kadar 46 yıllık bir süre için tahmin edilen modelin güvenilirlik testleri için bu çalışmada bazı popüler güvenilirlik testleri ile çoklu doğrusal regresyon yöntemi kullanılmıştır. Çalışma sonuçlarına göre ithalat, ihracat ve işçi dövizleri, Bangladeş'in ekonomik büyümesinde önemli bir role sahiptir. Bulgular ayrıca, büyüme, ihracat ve işçi dövizlerinin büyüme ile uzun vadeli pozitif bir ilişkiye sahip olduğunu, doğrudan yabancı yatırımın ise büyüme üzerinde negatif bir etkiye sahip olduğunu göstermektedir. Bir konu üzerine çeşitli araştırmalar yapılmış olsa da, bu çalışma, çeşitli sağlamlık testleri ile çoklu doğrusal regresyon yöntemini kullanan ilk çalışmadır. Bulgular politika formülasyonu için kullanılabilir.

ABSTRACT

The purpose of this paper is to examine the main factors that have significant effect on the economic growth of Bangladesh. Many studies around the world attempted to find the factors influencing the economic growth of different countries but for Bangladesh there are few research. To observe the main factors of economic growth, multiple linear regression method has been used with some popular diagnostic tests in this study to access the robustness of the estimated model for a period of 46 years from 1971 to 2016. The results of this study reveals that imports, exports, and remittances have a significant role in Bangladesh's economic growth. The findings further suggest that growth, export, and remittances have a long-term positive association whereas foreign direct investment has a negative influence on growth. Although various research has taken on an issue, this is the first initiative to use the multiple linear regression method with various robustness tests. The findings thus can be used for policy formulation.

1. Introduction

Bangladesh is a developing country where almost one-third of Bangladeshi people live in extreme poverty. However,

economic growth, directly and indirectly, depends on import, export, foreign direct investment, remittance, inflation, and trade openness. Firstly, imports and export are

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the potential sources for developing countries like Bangladesh and create the opportunity to achieve socio-economic goals like poverty reduction. A labor-intensive country like Bangladesh explores significant factors to generate employment opportunities, develop productive capacity, build up physical wealth and finally help to integrate the domestic economy with the global economy. Ramos (2001) investigated with the cointegration analysis using the data of import, export, and economic growth. The findings suggest that the expansion of imports has significantly aided China's economic growth export, which had the opposite effect.

Secondly, there is a theoretical link between foreign direct investment and economic development. According to the neoclassical and endogenous growth theories, FDI boosts economic growth in a capital-scarce economy by increasing the amount and efficiency of physical investment (Grossman & Helpman, 1991; Lucas, 1988; Romer, 1986; Sala-i-Martin & Barro, 1995). Third, a prolonged rise in commodity and service prices, i.e., inflation, results in a decline in the currency's buying power. The primary goal of macroeconomic strategies in both established and emerging economies is to maintain strong economic growth while maintaining low, one-digit inflation. The optimal degree of economic growth and inflations are somewhere in the center. Increasing or modest inflation might be seen as beneficial to the economy. On the other hand, zero inflation is destructive to other areas of the economy, lowering prices, earnings, and jobs (Faria & Carneiro, 2001).

Fourthly, there is a positive link between trade openness and economic growth. Regarding the risk-return relationship, trade openness is expected to influence international capital flows, demonstrating a country's competitive advantage in investing. Despite this positive site, some authors give some negative opinions; According to Rodrik (1992), economic openness can cause macroeconomic volatility by rising inflation, weakening currency rates, and provoking a balance of trade crisis, which is valid for Bangladesh.

Finally, international remittances help to alleviate poverty and enhance education and healthcare. Remittances are the primary source of growth in recipient nations' consumption and investment. Increased investment and consumption are indicators of economic progress. Mundaca (2009) finds remittances have a substantial and significant impact on economic growth. Yang (2008) in the Philippines and Osili (2004) in Nigeria find a positive effect of remittances on economic growth. Investment in human and physical capital can be facilitated by the sending and receiving countries' remittances. Because underdeveloped nations are more likely to utilize their remittances for consumption rather than investment, these can be detrimental. It's because they don't have enough savings to stimulate economic development. Thus Remittances and economic growth are strongly linked.

The main objective of this research paper is to find out the determinants of the economic growth of Bangladesh, or we can say to investigate, what are the factors influencing the

economic development of Bangladesh. To do so, we have gone through many variables, out of which most important ones have been included here.

2. Literature Review

2.1. Remittance and Economic Growth

Many academics have presented solid evidence that remittances lead to economic growth through their favorable influence on investment, savings, consumption, or trade. Several studies provide data to show the incredible impact of remittances on boosting investment.

In relation to this issue, Ratha (2003) suggests that local household spending increased by remittances, which may have significant multiplier effects as they're more mainly dependent on domestically produced items. According to Fayissa and Nsiah (2010), remittances boost economic growth in weak financial systems by giving an alternative means to fund investment and assist overcome liquidity limitations. On behalf of this issue, there is a beneficial association between remittances and economic growth. According to Iqbal and Sattar (2010), real GDP growth is positively associated with worker remittances from 1972-73 to 2002-03, and worker remittances have emerged as the third most significant source of funds for Pakistan's economic growth. Based on an empirical study of 99 countries, Aggarwal and Peria (2006) demonstrate that remittances benefit bank deposits and lending to GDP. Barajas, Chami, Fullenkamp, Gapen, and Montiel (2009) investigate the influence of worker remittances on economic growth in Asia-Pacific developing nations. Based on this issue, there is substantial evidence that it considerably helps to alleviate poverty while having a minor influence on growth.

Javid, Arif, and Qayyum (2012), on the other hand, discovered several pathways via which remittances might affect economic activity. Although the analysis does not conclusively establish the short-term relatively stable effect on consumption, the long-term effect on the economy of such flows appears equivocal. Catrinescu, Leon-Ledesma, Piracha, and Quillin (2009) investigated the effect of remittances on long-term growth in the economy. Moreover, the data support the notion that the growing influence of remittances increases in the presence of good macroeconomic policies and institutions. Sometimes remittance positively affects local economies regarding this (R. Chami, Fullenkamp, & Jahjah, 2005) report that a "significant proportion, and often the majority" of remittances is spent on "status-oriented" consumption goods. Adams and Cuecuecha (2010) discover, using a two-stage Heckman model with instrumental variables, that families receiving remittances purchase the most at the margin on investment goods. They classify their remittance revenues as transitional (rather than perpetual) cash flow, and the marginal propensity to invest out of transitional income is greater than that of other income sources.

2.2. Imports-Export and Economic Growth

The influence of imports on economic progress is insightfully dependent on the characteristics of exports and imports; for example, if imported goods are eatable, they are less helpful to increasing economic activity in the host nation. Moreover, only when imported goods include capital equipment and innovative materials, they might be beneficial to augment the economic growth in the home country.

X. Zhang and Zou (1995) examined the relationship between innovative materials imports and economic growth in emerging nations and discovered that external technology imports increase income rates of growth. Furthermore, the economy's growth pattern varies between emerging and established nations, with developing countries relying heavily on the market for foreign plant equipment and leasing foreign technologies. In contrast, Siddiqui and Iqbal (2005) discovered that exports, imports, and economic growth are insignificantly associated. Kotan and Saygili (1999) used two distinct model settings to predict Turkey's import demand function. It has been shown that, in the long run, the income level significantly impacts imports. Gulati (1978) investigated the impact of capital imports on savings and development in developing nations. According to his research, the effect of material imports on economic growth would vary depending on how much a scarcity of capital restricts the expansion.

Dutta * and Ahmed (2004) looked into the trends in Indian total imports from 1971 to 1995. His econometric calculations of the import-demand equation for India indicate that real GDP accounts for a sizable portion of import demand. In his analysis, Humpage (2000) asserted a positive association between imports and the economic boom. According to Hooper, Johnson, and Marquez (1998), an increment of 1% in the real GDP of the United States would result in a 2% increment in imports. Before the Asian Financial Crisis of 1997–1998, Wong (2008) studied the contribution of household consumption and exports to economic growth in the ASEAN-5 countries of Malaysia, Indonesia, Philippines, Thailand, and Singapore. The Granger causality test's findings provide some support for a bidirectional Granger causal relationship among economic growth and exports. Domestic demand and Exports must both increase for there to be effective sustained economy. Economic expansion will also boost exports and local demand. The export-led growth (ELG) approach is not strongly supported by data as the primary driver of the Asian financial crisis. Hussain (2014) uses yearly data compiled from 1976 to 2011 to investigate the connection between Pakistan's exports and GDP. The Augmented Dickey-Fuller stationarity test and cointegration and Granger causality tests determined that the variable was incorporated of the order one (H.L. Ahuja) at the first difference. The results show a one-way causal relationship between Pakistan's GDP and exports but not the other way around. Exports, imports, and GDP all exhibit a stable long-run relationship, according

to (Baharumshah & Rashid, 1999). The empirical results of their analysis showed that imports of foreign technology are a significant factor of long-term growth in the quickly expanding Malaysian economy.

The Granger-causality among imports, exports, and economic development for Portugal from 1865 to 1998 was examined by Ramos (2001). A one-way causal relationship between the factors taken into consideration was not supported by the study's empirical findings. There is a positive feedback relationship between the increase in exports and the rise in imports. To analyze the relationship involving economic growth and exports in Bangladesh, Al Mamun and Nath * (2005) looked at time-series data. The article discovers a cointegration between factory production and exports utilizing quarterly data for the years 1976 to 2003. An error correction model's (ECM) findings point to long-term unidirectional causation between exports and growth in Bangladesh. Love and Chandra (2005) analyze the export-led growth hypothesis for Bangladesh using yearly data on export, GDP, and import in a broad range of contexts and come to the conclusion that there is both short- and long-term unidirectional causation from income to exports.

2.3. Foreign Direct Investment and Economic Growth

Neo-classical growth theories make the assumption that FDI can direct funds needed to an economic system with a capital shortage's sectors of the economy, which in turn leads to boosting the rate of economic growth by raising capital's marginal productivity. There is a vast literature that highlights the potential benefits of FDI for economic progress. FDI also may contribute to growth by implementing innovation, which includes new manufacturing methods and systems, leadership abilities, concepts, and new strains of capital equipment, in addition to directly increasing capital creation in the receiving country. The significance of changes in technology for growth in the economy has been highlighted in the new growth literature when it comes to how FDI affects economic expansion.

Openness in international businesses, according to Acemoglu and Zilibotti (1997), helps channel capital inflows from nations with abundant capital to those with limited capital. A mechanism to capture the established nations by the emerging economies, such as mobility of money flows, aids in quickening the convergence process. According to K. Zhang (2001), FDI tends to foster growth in the economy in Asian economies more so than in Latin American ones. He goes on to say whenever a receiving country embraces trade agreements that are more liberal, enhance its educational system, and uphold economic stability, FDI is likely to impact economic growth. Additionally, McLean and Shrestha (2002) note that FDI has a greater impact on growth in developing nations than in developed countries. They show that a 1% rise in FDI may, on average, boost Gdp growth rate growth rates by 0.5 percent in emerging nations (Adhikary & Mengistu, 2008).

According to a recent report by Nath (2009), economic growth necessitates investing enough capital, where FDI serves two purposes: (H.L. Ahuja) it aids in the accumulation of capital, and (Sharif & Abdullah) it raises the productivity levels of investment.

Despite the linkage, actual data also shows a negative relationship between economic growth and FDI. Due to their vast amounts of cash, superior technology, increased market access, sophisticated marketing systems, and improved management and interpersonal skills, giant foreign companies may have a long-term detrimental impact on the growth and development of domestic enterprises in a host nation (M. R. Agosin & Machado, 2005; Kumar & Pradhan, 2005; Markusen & Venables, 1999). According to Choi (2006), FDI tends to produce monopolistic industrial structures, which might result in the "underutilization of productive forces."

2.4. Inflation and Economic Growth

There are several views on how trade liberalization and inflation affect economic growth, both negatively and positively. Li, Chen, and San (2010) showed one of them is the association between GDP growth and foreign trade in East China. The causality-based empirical study of the contemporary economy. In the setting of Brazil, which has long-term high inflation, Faria and Carneiro (2001) looked at the connection between economic growth and inflation. They discovered that while there is a short-term negative correlation between economic growth and inflation and that correlation does not persist over time by using a bivariate time series model (i.e., vector autoregression) with yearly data for the years 1980 to 1995. Their empirical findings are also consistent with the long-term super-neutrality of money.

The argument that long-term inflation affects growth in the economy is refuted by this empirical data. Chimobi (2010) used a wide sample of more than 100 nations from 1960 to 1990 to investigate the association between inflation and economic development. If a few national parameters (such as the education levels, fertility rate, etc.) are maintained constant, his empirical results suggest that there is a negative and statistically significant association between economic growth and inflation.

More precisely, a 10 percent annual increase in the average inflation slows the development of real per capita GDP by 0.2 to 0.3 percent. (Sweidan, 2004) looked at the economy of Jordanian from 1970 to 2003 to determine whether or not the association between economic growth and inflation had a structural threshold impact. He discovers that the structural threshold effect happens at an inflation rate of approximately 2% and that this association tends to be significant and positive below this level. Further than this point, inflation has a detrimental impact on economic expansion. According to (Levine & Renelt, 1992), a high level of trade liberalization may lead to higher, lower real exchange rates and inflation which might have a detrimental

effect on domestic investment. In other words, a trade regime that is more liberalized might result in a bigger depreciation of the exchange rate, which could decrease the total supply of inputs by raising the cost of the imported inputs that are employed in production. The quantity of domestic production afterward has a tendency to decline.

3. Trend Analysis

3.1. Gross Domestic Product (GDP)

GDP measures a nation's annual output of all finished products and services in terms of money or market value (Van den Bergh, 2009). The main metric for assessing a nation's economic health is its GDP. Without GDP, it is challenging to gauge an economy's size and living standards. The bigger the GDP, the better the level of life. As a result, all country's leaders work hard to boost their GDP. There are many methods to boost GDP, but exports are second to government spending in terms of simplicity. If you think back to how the Gross Domestic Product is calculated,

$$GDP = C + I + G + (Ex - Im) \quad \text{Equation (a)}$$

Where,

C=Consumption of all citizen	I= Investment	Im= Total Import
G=Government Expenditure	Ex =Total Export and	

Given that imports are taken into account when calculating GDP in Equation (a), a high import level can lower GDP. All nations strive to improve their GDP, and the simplest method to do so is to increase exports or decrease imports. However, this is not achievable for all nations at once since when one nation exports, another must import. If one country's trade balance is positive, another should have a negative trade balance. Although the aforementioned logic indicates a negative association between imports and GDP, several empirical investigations have shown a favorable association.

Imports may not directly contribute to GDP, but they could have a positive impact on it. As Lee (1995) points out, imports can help develop and grow industrial sectors. Since technological innovation influences the development of new industries. On the other hand, some import products, particularly those related to technology and equipment, raise economic output. As a result, this may contribute to better growth in the economy. Bangladesh's economy is growing at an average rate of 7.1 percent, currently the second developing economy in 2016. Bangladesh has seen an annual GDP growth rate of 6.5 percent since 2004, which has been primarily fueled by its exports of ready-to-wear clothing, remittances, and the local agriculture industry.

According to IMF data, the per-capita income in 2016 was predicted to be US\$3,840 (PPP) and US\$1466 (Nominal).

Table 1: Economy of Bangladesh

Economy of Bangladesh	
Export	\$34.02 billion (FY2016-17)
Export goods	garments, knitwear, agricultural products, frozen food (fish and seafood), jute and jute goods, leather
Main export partners	US 13.9%, Germany 12.9%, UK 8.9%, France 5%, Spain 4.7% (2015)
Imports	\$43.49 billion (FY 2016–17)

3.2. Factors influencing GDP

The growth of the socio-economic route of a home country is ultimately determined by a variety of social, economic, political, cultural, ethical, and moral elements. As a result, economic growth is a multi-faceted process encompassing a wide range of non-economic and economic elements. It is a vast phenomenon involving multiple elements that cover and extend beyond the economic sector. More precisely, the contributions of the 5 Ms, namely method, material, men, money, and machine, may be attributed to economic progress. Natural resources, Human resources, technical inputs, financial resources, and production facilities are the "5 Ms" as resources. However, the major factors influencing the economic growth of Bangladesh are, i) Export of goods and services; ii) Import of goods and services; iii) Remittance inflow; iv) Foreign direct investment; v) Inflation; vi) Trade openness; vii) Consumption.

3.3. Exports from Bangladesh

Bangladesh is an agriculturally based nation that mostly exports manufactured products. There are two categories of Bangladesh's primary export goods: i) Classic export items: agricultural products, tea, raw jute, leather, newsprint, paper, naphtha, bitumen, and furnace oil. ii) Non-traditional export items: ceramic goods, leather shoes, fruits and vegetables, frozen meals, handicrafts, chemical products, fertilizer, ready-made clothing, etc. Exports represent about 5.6% of the total Bangladeshi economic output. From above Figure 2, we can see that export has a fluctuating trend all over the concerned years, but it shows an increasing trend starting from the year 1985. In 2013 it reached the highest level, 20%, which is really appreciable.

3.4. Import of Bangladesh

In the global economy today, no nation is financially independent. Because each nation exports surplus goods to all other nations and purchases those from abroad that it needs. Bangladesh is an impoverished industrial nation that depends on agriculture. Bangladesh is therefore forced to purchase food and other necessities.

Bangladesh's \$38.3 billion in imports in 2015 placed it as the

54th-largest importer in the globe. From \$24.98 in 2010 to \$38.3 billion in 2015, Bangladesh's imports have grown at an annualized pace of 8.7% during the past five years. Refined petroleum comes in second with 3.2 percent of Bangladesh's total imports, while strong pure woven makes up 3.47 percent of the most recent imports. Bangladesh's imports fell from 315.58 BDT billion in May 2017 to 262.60 BDT billion in June. From 1976 to 2017, imports in Bangladesh increased by an average of 67.82 BDT billion, hitting a record high of 327.50 BDT billion in January 2017 and a slight decline of 0.57 BDT billion in *November 1976*.

From above Figure 3, we can see that import has always been fluctuating from the beginning to the end of the year 2016, the highest import was in 2012 when almost 27% were imported, but after that, we can see a decreasing trend in import which is appreciable as we are decreasing our dependency on abroad.

3.5. Trend of Inflation

Inflation has never been welcoming to any country. The government has always been tactful in controlling inflation or keeping it in a fixed range. We can see from Figure 4 that inflation has been stable since 1978. After that, we can see a decreasing trend which is acceptable for our economy as inflation leads to a fall in the currency's purchasing power as well as disrupts the smooth functioning of a market economy.

3.6. Trend of Foreign Direct Investment

Foreign direct investment is a blessing for the capital scares economy as we can see from Figure 5 that there is a stable trend up to 1996. After that, a dramatic fluctuation of increasing trend is shown which is starting from 1997 to 2015.

3.7. Total Remittance

From Figure 6, we can see that remittance has a fluctuating trend all over the concerned years since from 1976 to the end of the year 2016, the highest remittance was in 2012, when almost 11% were coming from foreign countries, but after that, we can see a decreasing trend of remittance which is not acceptable for an economy as foreign remittances are the source of poverty reduction.

3.8. Trend of Trade Openness

Trade openness is a good sign for an economy. From Figure 7, we can see that trade openness has a fluctuating trend all over the concerned years. Since the beginning of the end of the year 2016, the highest trade openness was in 2013, which was 46%, a great advantage for Bangladesh in undertaking investment.

4. Methodology

4.1. Data Information

The study article makes use of secondary data only. The World Development Database 2017 included the annual statistics utilized for the years 1971 to 2016.

4.2. Model Specification

This research paper's goal is to investigate how external factors influence economic growth. The analysis takes into account trade liberalization, inflation, foreign direct investment, remittances, imports, and exports based on data availability. The data used for the scientific investigation includes the years 1971 through 2016.

The following model is specified for the empirical analysis:

$$\text{Log GDP} = \beta_1 + \beta_2 \log \text{IMP} + \beta_3 \log \text{EXP} + \beta_4 \log \text{FDI} + \beta_5 \log \text{RMT} + \beta_6 \log \text{INF} + \beta_7 \log \text{TO} + \ell \quad (\text{Model 1})$$

$$\text{Log GDP} = \beta_1 + \beta_2 \log \text{IMP} + \beta_3 \log \text{EXP} + \beta_4 \log \text{FDI} + \beta_5 \log \text{RMT} + \ell \quad (\text{Model 2})$$

Where,

log GDP = log of real GDP; proxy of economic growth log IMP = log of real import

log EXP = log of real export log RMT = log of real remittance

log FDI = log of real foreign direct investment log INF = log of real inflation

log TO = log of real trade openness log = Natural Logarithm

The reason behind estimating Model 2 is that for Model 1, there are few variables that showed an insignificant relationship with the dependent variable GDP. So, Model 2 includes only significant variables to ensure the overall significance of the model.

5. Empirical Result & Findings

In this chapter, we work to find out a meaningful statistic by analyzing the time series data set for 1971-2016 and discover other characteristics of the data.

5.1. Stationary test (Graphical Analysis)

When the variance and mean of a random time series remain constant throughout time, it is considered to be stationary, and the covariance value between two time periods solely depends on the interval in between periods, or the lag, rather than the actual moment the variable is calculated (Gujrati, Gujrati, & Gujrati, 1995). On the other hand, if its variance, mean, and covariance fluctuate with time, it will not be

stable. Nonstationary data are typically unexpected and impossible to be modeled or predict. As previously mentioned, Gujrati always advises plotting the time-series data under consideration before pursuing formal testing. Such a narrative offers a first hint as to the kind of time series that is most likely. For instance, Figure 8 displays the IMP (import), GDP (economic growth), and EXP (export). Where IMP, GDP, and EXP have all increased throughout the research period, i.e., have shown an upward trend, this may indicate that the mean of these variables has been shifting. The variable series may not be stationary according to this.

Figure 6 in the Appendix section depicts that RMT (remittance) is gradually increasing from 1976 to 2016. As we show in this figure, there is no line of remittance from 1971 to 1975 due to Bangladesh's World Development Indicators (WDI) data spans from 1976 to 2016. Before that, Bangladesh only received a donation from a foreign countries. On the other hand, FDI (foreign direct investment) trend shows fluctuation till 2007, then again increases. Both RMT and FDI series are nonstationary. The trend of INF (inflation) shows a fluctuating trend, whereas TO (trade openness) shows a flatter increasing trend means that nonstationary.

5.2. Unit root test

Many time series makes the premise that the observations are stationary by nature. A unit root test was performed to confirm the stationarity of the series data used in this investigation. This test is important to avoid a spurious regression. The unit root test called Augmented Dickey-Fuller (Bradford), which has been considered for each series to create validation as to whether variables are integrated, is first used to check for a probable nonstationary issue. The results of the ADF test are reported in Table 2.

Here, the alternative and null hypotheses are:

H_0 : The residual series has a unit root

H_a : The residual series has no unit root

The decision rule, in this case, is that the null hypothesis will not be accepted if the "p-value from the ADF test is 0.05". Table 2 reports the ADF results for the variables in their levels and initial differences. However, they are stable in the first difference, which is statistically significant at the 5% level of significance, according to the reported ADF test, with the exception of log RMT and logs INF, which were significant at the 1% level as well.

Table 2: ADF test results for a unit root on the level and first difference of the original series

Variables	ADF test statistics	Probability	5% critical value	10% critical value	Decision
log GDP	-0.050743	0.9484	-2.928142	-2.602225	Nonstationary
Δ log GDP	-7.092767	0.0000	-2.929734	-2.603064	Stationary
log IMP	-0.092773	0.9439	-2.928142	-2.602225	Nonstationary
Δ log IMP	-7.797518	0.0000	-2.929734	-2.603064	Stationary
log EXP	0.559195	0.9869	-2.929734	-2.603064	Nonstationary
Δ log EXP	-12.33280	0.0000	-2.929734	-2.603064	Stationary
log FDI	-1.735870	0.4067	-2.929734	-2.603064	Nonstationary
Δ log FDI	-8.243201	0.0000	-2.931404	-2.603944	Stationary
log RMT	-4.234222	0.0018	-2.936942	-2.606857	Stationary
Δ log RMT	-8.193675	0.0000	-2.938987	-2.607932	Stationary
log INF	-3.997339	0.0032	-2.928142	-2.602225	Stationary
Δ log INF	-8.862937	0.0000	-2.929734	-2.603064	Stationary
log TO	-1.396779	0.5755	-2.928142	-2.602225	Nonstationary
Δ log TO	-8.326769	0.0000	-2.929734	-2.603064	Stationary

Note: Δ means the first difference

In Table 2, the results indicate that in the ADF test at levels, all the variables are nonstationary except RMT and INF. When we include a constant, all the variables (GDP, EXP, IMP, FDI, RMT, INF, too) become stationary at their first difference in ADF test statistics, including the test statistics' critical values (also shown in absolute terms) at the 5 percent and 10 percent level of significance.

In an econometric analysis, model specification is an important fact. Keeping in mind that we specify a regression model to check the goodness of fit and association of explanatory variables. The aim was to ignore variables that don't show significant relations with the dependent variable economic growth. Finally, specify a model that is best fitted and its resources are significant enough. Table 3 shows regression results for Model 1 **Hata! Başvuru kaynağı b ulunamadı..**

5.3. Regression Analysis of Model I and Model II

Table 3: Regression results for model 1

Model 1				
Variable	Coefficient	Std. Error	t-statistic	Prob.
Constant	2.222204	0.032172	69.07304	0.0000
log IMP	0.704556	0.009342	75.41510	0.0000
log EXP	0.298766	0.007505	39.80764	0.0000
log FDI	0.001789	0.001110	1.611222	0.1164
log RMT	-0.001690	0.002975	-0.567860	0.5739
log INF	-0.003498	0.001792	-1.952264	0.0592
log TO	-0.983883	0.012885	-76.35586	0.0000
R- squared	0.999935	Adjusted R- squared		0.999924
F- statistic	87391.13	Durbin- Watson		1.795317
Prob (F-statistic)	0.000000	Dependent variable		Log GDP

From the above result, it's clear that GDP is highly influenced by import and then export. The Foreign direct investment shows an insignificant result. Remittance has a negative impact on GDP with an insignificant result. On the other hand, both inflation and trade openness show a negative impact on GDP with a significant sign. Though all other variables show expected to sign with GDP, if we consider significant behavior, then we ignore all other variables except import and export.

We can also consider a new model to get a significant relationship between dependent and independent variables. However, the Durbin-Watson value confirms that the model is 99% fit.

Model 2 has been formulated to get a robust result. Table 4 below shows the regression result of Model 2.

Table 4: Regression results for model 2

Model 2					
Variable	Coefficient	Std. Error	t-statistic	Prob.	Status
Constant	3.633254	0.332086	10.94071	0.0000	
log IMP	0.401947	0.091547	4.390602	0.0001	***
log EXP	0.237343	0.079567	2.982916	0.0051	***
log FDI	-0.026909	0.013419	-2.005351	0.0525	**
log RMT	0.104731	0.033813	3.097404	0.0038	***
R-squared	0.988671	Adjusted R-Squared		0.987412	
F-statistic	785.4207	Durbin-Watson		0.896455	
Prob.(F-statistic)	0.000000	Dependent variable		Log GDP	

Note: (*) Shows level of significance.

Except for foreign direct investment, every variable in Model 2 exhibits significant results at the 1% level, but it's acceptable at a 5% level of significance with a negative coefficient. Findings indicate that the intercept of the model is positive. Table 4 shows that the four variables in Model 2 could independently explain about 98 percent of the economic growth inflow. If the coefficients of the two models are observed, the effect of remittance and foreign direct investment are now significant in Model 2 when inflation and trade openness are excluded.

Using the findings estimated GDP inflow function can be shown below:

$$\begin{aligned} \text{Log GDP} = & 3.633254 + 0.401947 \log(\text{IMP}) \\ & + 0.237343 \log(\text{EXP}) - 0.026909 \log(\text{FDI}) \\ & + 0.104731 \log(\text{RMT}) + \ell \end{aligned}$$

Estimated coefficients for IMP, EXP, FDI, and RMT have displayed in Table 4's second column. Following is a step-by-step discussion of the significance of each of these coefficients' sign and size.

At a significant level of less than 1%, the predicted IMP coefficient is positive (0.401947) and highly significant. In the case when $(1 > 0)$, it is anticipated that there would be a positive correlation between imports and GDP. The probability and t-statistic values are 10.94071 and 0.0001, respectively. The positive coefficient implies that a rise in IMP will accelerate Bangladesh's economic expansion.

Here the coefficient of the export shows a positive (0.237343) relationship between export and GDP with the sign at a 1% level of significance. The value of the t-statistic and the probability are 2.982916 and 0.0051, respectively. The positive coefficient suggests that an increase in export increase the GDP growth.

Foreign direct investment influences the matter of GDP. If we compare it with Model 1, the probability of FDI shows insignificant with the positive 0.1164 at (above 10%) level of significance. But in Model 2, when inflation and trade openness are omitted, FDI represents a negative coefficient (-0.026909) means that as FDI increases, the GDP decreases. The value of the t-statistic and probability are -2.005351 and 0.0525, respectively. Our estimation results demonstrate that when states concentrate on low-quality

goods, FDI could be detrimental to economic growth; however, once nations concentrate on high-quality products and their export portfolio meets a minimum quality standard, FDI undoubtedly boosts growth. Dependence on outside investment frequently has a negative impact on how income is distributed and how quickly the economy grows. The core tenet of the dependency hypothesis is that an economy under foreign control expands incoherently rather than spontaneously (Amin, 1974). According to dependency theories, giant international players may have a long-term negative impact on the development and development of domestic firms in a host nation because they have access to global markets, advanced marketing networks, more innovative tech, and better organizational and interpersonal skills (Markusen & Venables, 1999).

Remittance inflows have a positive elasticity of 0.104731, which is good. The t-statistic value is 3.097404, and the probability is 0.0038. The impact of remittance is significant with less than a 1% significance level, indicating that it may help households with their credit constraints and thereby promote entrepreneurship and domestic investment. Remittances additionally support the improvement of human resources, including that health and education, which are important factors in fostering sustainable economic development (M. R. Chami, Jahjah, & Fullenkamp, 2003).

5.4. Cointegration test

We employ the Johanson Co-integration test to determine the cointegration between the variables. This test demonstrates that the residual is stable at the level form when the estimated value is bigger than the critical value Table 5.

H_0 : Variables are not co-integrated.

Table 5: Test for cointegration of all the variables series

Model Residuals	Data-based value of the test statistic	Critical value at 5% level	Result
Constant and trend	70.61232	69.81889	Reject H_0
Conclusion	The critical value < calculated value, i.e., null hypothesis, will not be accepted. Variables are co-integrated, which indicates		

that a long-run relationship exists among variables.

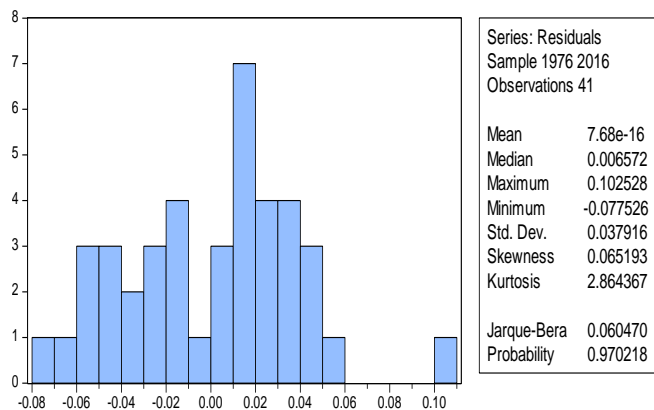
5.5. Normality test

To assess whether a data collection is adequately approximated by a normally distributed or not, or to calculate how an underlying random variable is to be normally distributed, normality tests are employed in statistics. The bell-shaped, normal-like distribution should be reflected in the empirical distribution. The computed t-ratios are subpar, and conclusions may not be accurate if the residual distribution is not normal. Testing for normalcy is crucial for this reason.

Ho: Residual series are normally distributed.

Here, the Jarque-Bera test has been employed as a visual examination. Figure 1 shows the result of the normality test: The decision rule here is, Perfectly Symmetric residuals will have a skewness of zero, and for a normal distribution, the kurtosis value is 3

Figure 1: Test for Normality



The following statistic must be used to determine the skewness and kurtosis measurements of the OLS residuals for the test,

$$JB = n \left[\frac{S^2}{6} + \frac{(K - 3)^2}{24} \right]$$

Where *S* and *K* are the skewness and kurtosis respectively.

According to the E-Views estimate, the skewness and kurtosis are 0.065193 and 2.864367, respectively. The value of Jarque-Bera is 0.060470. Because JB statistics use the chi-square distributions and the critical value is 5.991 at the 5% significant level with two degrees of freedom, the results may suggest that the null hypothesis cannot be ruled out. Remainders are therefore regularly distributed.

5.6. Ramsey RESET test

A generic specification test for the linear regression model is the Ramsey Regression Equation Specification Error Test (RESET) (Ramsey, 1969). The test is based on the premise

that the model is incorrectly described if non-linear mixtures of the explanatory variables may describe the response variable at all.

Model 2 is being considered for testing whether there is any specification error. A general test of specification error Ramsey RESET test has been assisted in testing the specification error of the model by using E-views 8.1.

H₀ : There is no specification error

Results are as follows in Table 6

Table 6: Test of specification error

Model	Data-based value of the test statistic	Critical value of 5% level	Result
Constant and trend	0.004302	4.125	Accept H ₀
Conclusion	Therefore, F-critical > F-calculated evidence shows that we accept the null hypothesis. So we can conclude that there is no specification error.		

5.7. Heteroscedasticity test

If there are subpopulations with distinct variances from the others, that group of random variables is said to be heteroscedastic in statistics. Here, the White Heteroscedasticity Test has been used to check for Heteroscedasticity.

H₀: There is no heteroscedasticity

The aim is not to reject the null hypothesis. The decision rule is if critical value $\chi^2 >$ calculative χ^2 value, then null hypothesis will be accepted, otherwise rejected.

Table 7: Test for Heteroscedasticity

	Obtained χ^2	Critical value	Result
Model	18.11392	22.3621(5%)	Accept H ₀
Conclusion	Obtained $\chi^2 <$ critical value of χ^2 at a 5% level of significance. So, the model is free from Heteroscedasticity at a 5% level of significance. Finally, we can conclude that there is no Heteroscedasticity.		

5.8. Autocorrelation test

The term "autocorrelation" describes the relationship between a time series and its own past and present values. Lagged correlation or serial correlation are other names for autocorrelation that describe the relationship between

individuals in a group of numbers that are sorted chronologically. For autocorrelation in this instance, I utilized the Breusch-Godfrey Serial Correlation Lagrange Multiplier test.

H_0 : There is no serial correlation in the residual.

The decision rule is, If P-value < 0.05, the null hypothesis will be rejected or if F-critical < F-calculated null will be rejected. The results of the autocorrelation test have been presented in Table 8 below.

Table 8: Brush-Godfrey Serial Correlation Lagrange Multiplier

Model	Calculated value	Critical value at 5% level	Prob. F-statistic	Result
Constant and Trend	7.586844 (F test)	3.275 (F-stat. 2,34)	0.0016	Reject H_0
Conclusion	Here, the P-value < 0.05 at the 5% level of significance and both F-critical < F-calculated value. So, the null hypothesis will not be rejected i.e., there exist serial correlation in the residual, which is not expected.			

To correct this serial correlation, the HAC-standard error approach can be applied to obtain the correct standard error. But there is a possibility that this correction may affect other results. So we decide to ignore this.

5.9. Chow breakpoint test (Structural Stability test)

The data has indeed been split into two groups a priori for the Chow test, and two regressions across the sub-periods are contrasted with the entire sample regression using the F-ratio. Two groups: one is 1971 to 1999 another is from 2000 to 2016. Where the null hypothesis is "No structural change" and the alternative hypothesis is "Structural change."

The aim is not to reject the null hypothesis. The decision rule here is that null will be accepted if F-critical > F-calculated, and if P-value > 0.05, null will be accepted. The result is presented in Table 9 below:

Table 9: Chow Breakpoint test (Structural Stability test)

Model	F-Calculated value	Critical value at 5% level	Prob. F(5,31)	Result
Constant and trend	1.455322	2.53	0.2327	Accept H_0
Conclusion	Here, F-critical > F-calculated. Evidence does			

not support rejecting the null hypothesis; thus, we can say that the null hypothesis of "No structural change" is accepted. That is, our model is found structurally stable over time.

6. Recommendation

A developing country like Bangladesh is an import-oriented country. It mainly imports primary goods, manufactured commodities & capital goods. For importing this raw material for production purposes, from the beginning, its imported expenditure is higher than the export expenditure, indicating a negative balance of payment. If we notice the import trend in Bangladesh, as discussed in chapter 3.4, we can conclude that due to the different time lag, the import cost decreases daily. Thus, it is enabling to enhance production by the proper utilization of imported raw materials. A positive balance of payment can be a notice in that case. Therefore there exists a long-term relationship among these variables reflecting the "Marshall-Lerner Theory."

In the short run, import expenditure is greater than export expenditure. A negative balance of payment at middle BOP becomes stable, and after that, in the long run, import expenditure decreases as export expenditure increases; a positive balance of payment follows the Marshall-Lerner Theory by denoting a "J-curve" shape.

In Bangladesh, import expenditure exceeds export revenues. As a result, the trade balance is unfavorable. A good trade balance in Bangladesh necessitates well-planned tactics. As a result, the following strategies must be implemented to achieve the export and import policy's objectives.:

- Standardizing export systems and promoting efficiency in the business sector. The government should promote greater private sector participation while continuing to act as a facilitator.
- Increasing their competitiveness by increasing technical expertise and productivity, promoting cost reduction, and achieving a globally recognized standard of quality for exportable commodities.
- Ensuring that the manufacture of export products uses the greatest amount of local raw resources and supports the development of industries with backward links.
- To cut import costs, import substitute sectors such as locally-based input materials industries should be formed. In addition, the volume of premium importable commodities such as expensive perfume, trendy items, luxury vehicles, etc., should be decreased. Controlled import policies should be used rather than liberal import policies.

The clothing industry, which has lost stability over the past several years owing to political unrest, inadequate maintenance, the low worker pays, and other factors, is another factor that affects exports. The owners took

advantage of the employees' inexperience and poverty by forcing them to labor in unhygienic conditions in congested factories with inadequate ventilation and risky working conditions. It results in a catastrophe that kills the workers. In order to make big profits in the eyes of the shareholders, they also breach the safety rules. The apparel industry chief executive stated that raw clothing ingredients, such as cotton and thread color, must be imported. This reliance on raw resources hampers the growth of the apparel business.

Furthermore, overseas sources frequently supply poor materials, leading to low-quality goods. The CEO explained that contemporary political turmoil had had a negative impact on the ready-to-wear industry, driving up production costs. The government of Bangladesh sets minimum salaries for different types of employees, and 99 percent of the workforce reports that these pay scales also relate relatively low to quality of living, which is one of the main difficulties facing our garment sector. According to a 1998 poll, 73 percent of female assistants received less than subsistence wages, compared to only 15 percent of their male colleagues. Labor upheaval as a result. The recommendation for policy against the apparel industry is,

- The government also has a part to play in resolving the issue by creating a proper policy to safeguard the apparel industry, resolving the license issue, enabling faster loading facilities in the port, creating a suitable working environment, and keeping the sector free of political matters and biases. Whenever the industry needs help, attention has to be given.
- Bangladesh is now experiencing a power problem that the sun's electricity may resolve. A suitable area for using renewable power is Bangladesh, which is between 20.30 and 26.38 degrees north latitude and 88.04 and 92.44 degrees east.
- The government's main priorities should be the nation's production and acquisition of premium raw resources. Government should leverage public-private partnerships for this goal. This will give the country plenty of opportunities to increase national income significantly.
- Economic progress is dependent on the presence of reliable infrastructure. The execution of the legislation should be a priority for policymakers as much as the creation of the law. The government must concentrate on creating a distinct path for import and export activity. It might be a highway, a subway line, a larger cargo ship, etc. By issues with safety, building infrastructure, unskilled labor, transit issues, lead times, and others will be avoided.
- It is well known that Bangladesh's labor productivity levels are lower than that of South Korea, Sri Lanka, and Hong Kong. If Bangladesh wishes to compete locally, if not worldwide, it must seek measures to increase its workforce's efficiency. If our nation achieves the highest

work efficiency due to the availability of inexpensive labor, we believe that the future of this industry is quite bright. BKMEA has already launched a fashion design teaching program. Numerous private universities and training centers have already launched a variety of programs in relation to this topic.

- The two major political parties should refrain from engaging in any negative or divisive actions that would be detrimental to the interests of the general populace, such as a strike. They ought to behave outside of the corporate world.
- To build a manufacturing unit, a government agency must verify that the apparel industry conforms completely with the Factory Act of 1965. The Rana Plaza collapse and Tazreen fire have highlighted the importance of workplace safety. A paradigm change has occurred within the sector as a result of the incidents. The rights and privileges of the workers must also be guaranteed for that. The setting where you work should be comfortable.

Notwithstanding several government initiatives to increase the inflow, the number of remittances sent to Bangladesh fell to \$12.76 billion in the most recent fiscal year from \$14.93 billion the year before, representing a 14.48 percent year-over-year reduction. According to the most recent Bangladesh Bank data, remittances were also at their lowest level during the 2016–17 fiscal year in the previous five years. According to experts, the high value of the taka versus the dollar, the drop in oil prices on the international market, the loss in income of expatriates working in the Middle East, and the use of illicit routes for money transfers were the main causes of the decrease in inflow. The majority of our remittances originate from the Middle East, whose labor markets have been negatively impacted by the drop in oil prices. Many of the Bangladeshi exports there have seen a decline in their income or loss of employment. It is particularly concerned about mobile applications that promote hundi transactions, a sort of unofficial money transfer in which an export transmits income to an agent wherever they are stationed in exchange for receiving an equivalent sum back in Bangladesh.

In rising countries, foreign direct investment (FDI) has been remarkable and has helped a nation's total economic growth. Though it is not always desirable, being self-sufficient is a positive indicator of the state of the economy. It would be preferable to accomplish economic growth by leveraging these resources if the host nation's economy had adequate capital, superior technology, higher market access, sophisticated marketing networks, and stronger management and human connection skills. The following points need to be taken into account. The government must inspire our young people to start their own businesses and ensure that there is a trained and educated workforce, a suitable training facility, and reasonable technical innovations.

Indeed, our state is implementing a valiant effort to become independent of outside assistance. Regarding this subject, Bangladesh's decision to risk its cash in order to finish the "Padma Bridge" is a wonderful illustration.

7. Concluding Remarks

The results of this study indicated that imports, exports, and remittances are crucial for Bangladesh's economic growth. The findings suggest that while foreign investment has a negative effect on growth, growth has a long-term favorable association with export and remittance.

There are several studies regarding economic growth and import in the research, but none have looked at how different import categories affect it. In order to evaluate the link between imports and economic growth, this study first attempted to break out the imports.

Any country's economic progress depends heavily on imports, particularly if such imports contain cutting-edge capital goods, ideas, and technology. The import-led growth hypothesis contends that commodities intended for export should be produced using imported raw materials to boost economic growth. New technical transfers support the economic progress in emerging nations, as argued by X. Zhang and Zou (1995). Instead of focusing on the imports of consumable products, Bangladesh should pay much attention to the imports of innovative technologies and capital goods.

The largest and most crucial factor of economic growth is remittance. In a sample of 21 LAC countries, Nsiah and Fayissa (2013) found a long-term link between per-capita income and per-capita remittances. More exactly, a 10% rise in remittances corresponds to a 0.3% rise in income. The effect of remittance, however, has been rather subpar due to several recent issues, including cash transfers via Hundi, bKash, and MCash, among others. Another factor is that migration contributes to brain drain and that migrants sometimes go overseas in search of better facilities. However, FDI plays a smaller role in affecting GDP growth rates than remittances and the volume of imports and export. Therefore, spending this money on consumption and investments can assist these countries' economies sustain and boosting economic development. In order to strengthen Bangladesh's economic growth, the government is anticipated to focus more on the elements mentioned earlier. The government should concurrently develop monetary policies and export-led fiscal to boost exports and GDP growth rates.

Although economic growth and FDI are positively correlated, the study discovered a negative correlation between the two factors. Foreign investment often has a detrimental effect on income distribution and economic growth. Long-term, it has a detrimental impact on local enterprises' growth and development since they possess a significant amount of capital, superior technology, greater access to markets, sophisticated marketing networks, and

stronger management and interpersonal skills (M. Agosin & Mayer, 2000; Kumar & Pradhan, 2005; Markusen & Venables, 1999). According to Choi (2006), FDI often results in monopolistic industrial structures that underuse productive forces. In addition, contend that FDI may negatively influence a nation's employment, income distribution, national sovereignty, and autonomy. If a country must import manufacturing inputs, FDI may have a negative impact on its balance of payments (Musila & Sigué, 2006).

Moreover, when earnings and cash are repatriated, a country's financial stability may be weakened due to dwindling foreign exchange reserves. Therefore, FDI does not help in development; rather, it damages the development process (Razin, Sadka, & Yuen, 1999). We conclude that FDI is nation-specific and can be positive, negative, or inconsequential depending on a host country's economic, technological, and institutional factors in light of the conflicting theoretical and empirical findings on FDI and economic growth.

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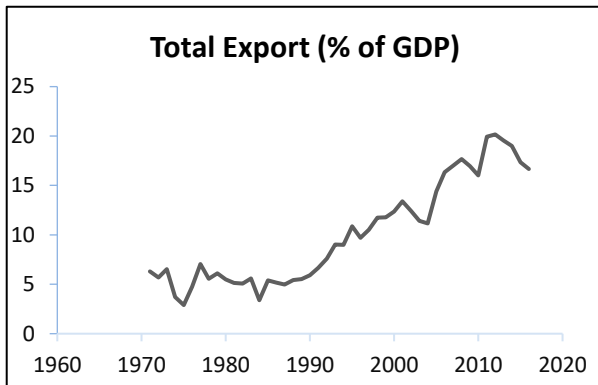
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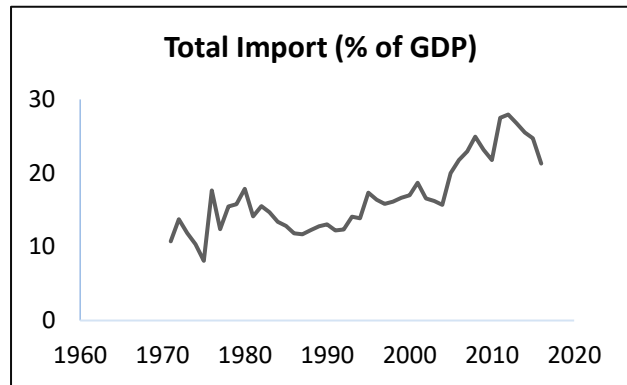
Appendix

Figure 2: Total Export from Bangladesh



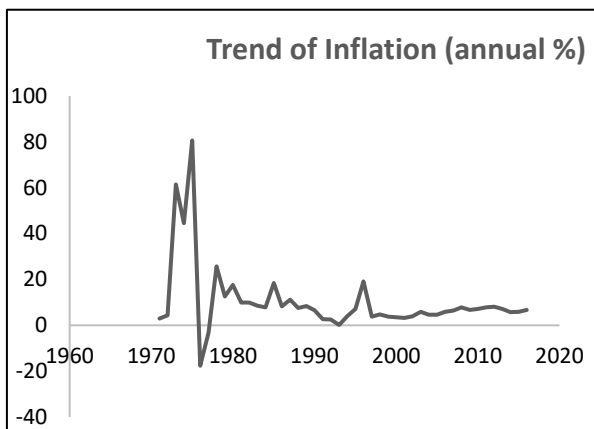
Source: World Development Indicators

Figure 3: Total Import in Bangladesh



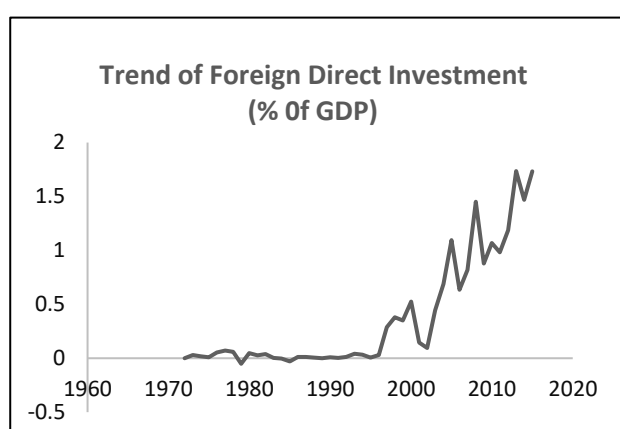
Source: World Development Indicators

Figure 4: Trend of Inflation



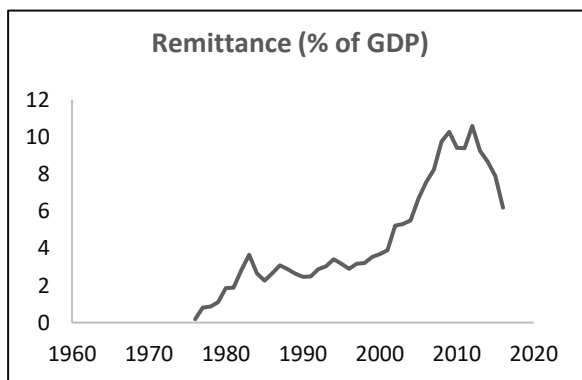
Source: World Development Indicators

Figure 5: Trend of Foreign Direct Investment



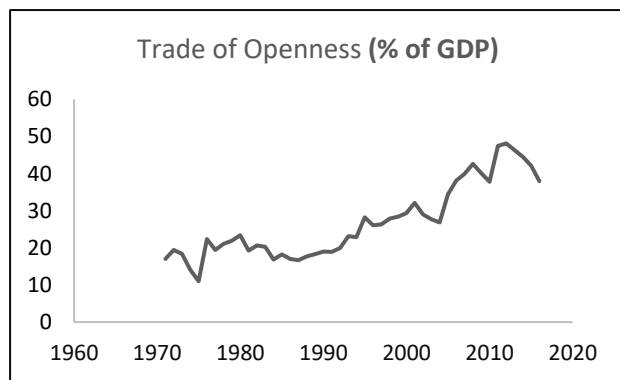
Source: World Development Indicators

Figure 6: Total Remittance



Source: World Development Indicators

Figure 7: Trade of Openness



Source: World Development Indicators

Figure 8: Log GDP, Log IMP, Log EXP

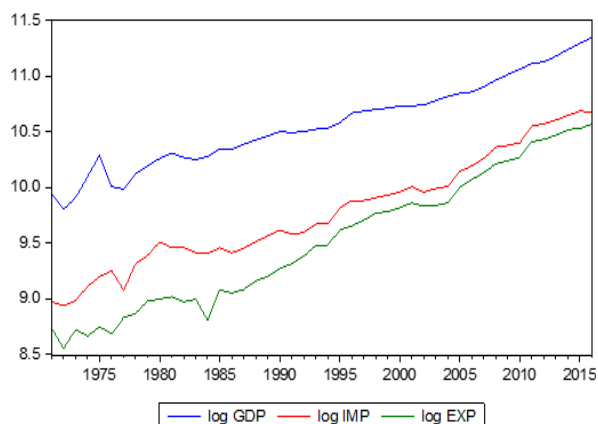


Figure 9: Log FDI, Log RMT, Log INF, Log TO

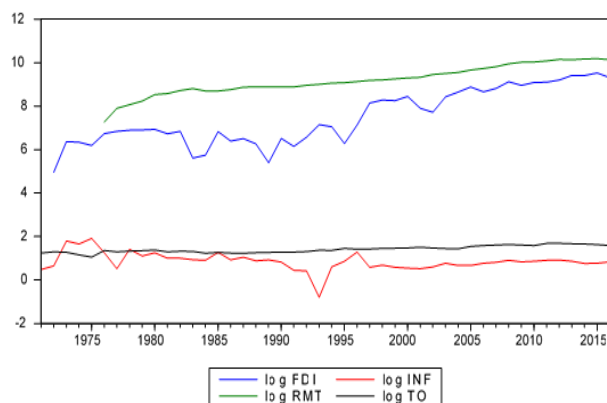


Table 10: Data used in this study

Year	GDP	IMP	EXP	FDI	RMT	INF	TO
1971	8,751,842,839.7	938,861,337.7	550,621,082.3			2.963255	0.170191
1972	6,288,245,866.7	863,537,083.3	356,841,000.0	90000		4.40202	0.194073
1973	8,086,725,729.3	958,701,323.7	528,824,097.2	2340000		61.40578	0.197625
1974	12,512,460,519.7	1,294,857,682.7	463,095,606.3	2200000		44.54272	0.140496
1975	19,448,348,073.5	1,575,422,622.8	563,045,020.3	1543333		80.56976	0.109956
1976	10,117,113,333.3	1,784,273,649.8	480,166,471.4	5420000	18761274	-17.6304	0.223823
1977	9,651,149,301.9	1,194,951,861.7	679,513,484.2	6980000	78875038	-3.21016	0.194222
1978	13,281,767,142.9	2,056,130,687.8	738,155,879.6	7700000	1.15E+08	25.61889	0.210385
1979	15,565,480,321.9	2,459,010,308.8	950,929,356.1	-8010000	1.71E+08	12.56451	0.219071
1980	18,138,049,095.6	3,243,617,764.9	996,555,891.5	8510000	3.39E+08	17.55507	0.233772
1981	20,249,694,002.4	2,858,506,731.9	1,038,984,088.1	5360000	3.81E+08	9.89469	0.192472
1982	18,525,399,201.6	2,877,295,409.2	940,219,560.9	6960000	5.26E+08	9.855812	0.206069
1983	17,609,048,821.5	2,590,824,915.8	986,784,511.8	403978.6	6.42E+08	8.487756	0.203169
1984	18,920,840,000.0	2,538,320,000.0	642,600,000.0	-553269	5.01E+08	7.875566	0.168117
1985	22,278,423,076.9	2,860,038,461.5	1,199,576,923.1	-6660000	5.02E+08	18.49512	0.182222
1986	21,774,033,333.3	2,577,133,333.3	1,128,533,333.3	2436499	5.76E+08	8.254405	0.170187
1987	24,298,032,258.1	2,842,322,580.6	1,212,483,871.0	3205087	7.48E+08	11.11963	0.166878
1988	26,579,005,760.3	3,255,865,305.0	1,442,788,426.3	1838242	7.64E+08	7.495835	0.176781
1989	28,781,714,763.8	3,679,750,953.7	1,594,548,362.4	247908.3	7.58E+08	8.337973	0.183252
1990	31,598,341,233.6	4,126,170,021.4	1,866,930,004.6	3238781	7.79E+08	6.532735	0.189665
1991	30,957,483,290.5	3,785,238,014.7	2,062,576,986.9	1390444	7.69E+08	2.729532	0.188898
1992	31,708,873,954.9	3,915,198,860.1	2,405,649,818.9	3721853	9.12E+08	2.582162	0.19934
1993	33,166,520,084.8	4,677,910,147.0	2,990,714,345.8	14049887	1.01E+09	0.155518	0.231216
1994	33,768,662,171.2	4,681,795,689.9	3,039,700,864.1	11147788	1.15E+09	3.966216	0.228659
1995	37,939,748,051.4	6,580,596,890.5	4,122,014,847.4	1896372	1.2E+09	7.144939	0.282095
1996	46,438,482,370.4	7,601,784,556.7	4,507,554,843.6	13529832	1.34E+09	19.14321	0.260761

1997	48,244,308,274.8	7,625,081,831.5	5,075,480,003.3	1.39E+08	1.53E+09	3.800232	0.263255
1998	49,984,559,471.4	8,058,876,652.0	5,876,850,220.3	1.9E+08	1.61E+09	4.736213	0.278801
1999	51,270,569,883.5	8,525,935,940.1	6,028,722,961.7	1.8E+08	1.81E+09	3.781038	0.283879
2000	53,369,787,318.6	9,060,862,651.6	6,588,073,941.6	2.8E+08	1.97E+09	3.446659	0.293217
2001	53,991,289,844.3	10,102,557,450.0	7,227,575,982.2	78527040	2.1E+09	3.26116	0.32098
2002	54,724,081,490.5	9,060,891,520.1	6,791,241,511.4	52304931	2.86E+09	3.892867	0.289674
2003	60,158,929,188.3	9,761,830,742.7	6,876,856,649.4	2.68E+08	3.19E+09	5.815817	0.276579
2004	65,108,544,250.0	10,229,675,556.3	7,257,329,709.5	4.49E+08	3.58E+09	4.562136	0.268582
2005	69,442,943,089.4	13,891,430,894.3	9,994,813,008.1	7.61E+08	4.64E+09	4.586361	0.343969
2006	71,819,083,683.7	15,626,727,218.6	11,744,907,683.1	4.57E+08	5.43E+09	5.875972	0.381119
2007	79,611,888,213.1	18,268,578,048.1	13,530,306,979.4	6.51E+08	6.56E+09	6.471223	0.399424
2008	91,631,278,239.3	22,873,050,575.7	16,181,037,749.6	1.33E+09	8.94E+09	7.860966	0.426209
2009	102,477,791,472.4	23,726,338,034.7	17,359,874,074.2	9.01E+08	1.05E+10	6.764355	0.400928
2010	115,279,077,465.2	25,106,319,010.5	18,472,449,276.1	1.23E+09	1.09E+10	7.144649	0.378028
2011	128,637,938,711.4	35,373,857,176.8	25,627,346,571.3	1.26E+09	1.21E+10	7.859446	0.474208
2012	133,355,749,482.5	37,272,043,676.6	26,886,637,936.5	1.58E+09	1.41E+10	8.164598	0.481109
2013	149,990,451,022.3	40,135,237,754.5	29,304,945,498.3	2.6E+09	1.39E+10	7.174963	0.462964
2014	172,885,454,931.5	44,128,009,984.5	32,830,360,072.3	2.54E+09	1.5E+10	5.668755	0.445141
2015	195,078,665,827.6	48,280,651,359.5	33,820,154,152.8	3.38E+09	1.54E+10	5.872777	0.42086
2016	2.21E+11	3.23E+11	2.32E+11	2E+09	1.37E+10	6.727836	

Table 11: Values converted to % of GDP

Year	IMP(% of GDP)	EXP(% of GDP)	INF(annual %)	FDI(% of GDP)	RMT (% of GDP)	TO (% of GDP)
1971	10.72758	6.291487	2.963255			17.01907
1972	13.73256	5.67473	4.40202	0.001431		19.40729
1973	11.85525	6.539409	61.40578	0.028936		18.39466
1974	10.34855	3.701075	44.54272	0.017582		14.04962
1975	8.100547	2.895079	80.56976	0.007936		10.99563
1976	17.63619	4.746082	-17.6304	0.053573	0.185441	22.38227
1977	12.38145	7.040752	-3.21016	0.072323	0.817261	19.4222
1978	15.48085	5.557663	25.61889	0.057974	0.869127	21.03851
1979	15.79784	6.109219	12.56451	-0.05146	1.099476	21.90706
1980	17.88295	5.494284	17.55507	0.046918	1.867162	23.37723
1981	14.1163	5.130863	9.89469	0.02647	1.881767	19.24716
1982	15.53162	5.0753	9.855812	0.03757	2.841848	20.60692
1983	14.71303	5.603849	8.487756	0.002294	3.648173	20.31688
1984	13.41547	3.396255	7.875566	-0.00292	2.646539	16.81173
1985	12.83771	5.384479	18.49512	-0.02989	2.255417	18.22218
1986	11.83581	5.182932	8.254405	0.01119	2.64665	17.01874
1987	11.69775	4.99005	11.11963	0.013191	3.077652	16.6878
1988	12.24976	5.428301	7.495835	0.006916	2.873027	17.67806
1989	12.78503	5.540144	8.337973	0.000861	2.633545	18.32517
1990	13.05819	5.908316	6.532735	0.01025	2.464894	18.9665
1991	12.22721	6.662612	2.729532	0.004491	2.485233	18.88983
1992	12.34733	7.586677	2.582162	0.011738	2.875409	19.93401

1993	14.10431	9.017269	0.155518	0.042362	3.037325	23.12158
1994	13.86432	9.001544	3.966216	0.033012	3.408134	22.86586
1995	17.34486	10.86463	7.144939	0.004998	3.167296	28.2095
1996	16.36958	9.706508	19.14321	0.029135	2.895575	26.07609
1997	15.80514	10.52037	3.800232	0.288897	3.164103	26.32551
1998	16.12273	11.75733	4.736213	0.380236	3.213146	27.88006
1999	16.6293	11.75864	3.781038	0.350421	3.524038	28.38794
2000	16.97751	12.3442	3.446659	0.525362	3.686597	29.32171
2001	18.71146	13.38656	3.26116	0.145444	3.897946	32.09802
2002	16.55741	12.40997	3.892867	0.095579	5.222669	28.96738
2003	16.22674	11.43115	5.815817	0.445961	5.305388	27.65788
2004	15.71173	11.14651	4.562136	0.689472	5.504373	26.85823
2005	20.00409	14.39284	4.586361	1.09515	6.685179	34.39693
2006	21.75846	16.35346	5.875972	0.635657	7.557205	38.11192
2007	22.94705	16.99533	6.471223	0.817754	8.242885	39.94238
2008	24.96206	17.65886	7.860966	1.449748	9.757161	42.62091
2009	23.15266	16.94013	6.764355	0.879495	10.26628	40.0928
2010	21.77873	16.02411	7.144649	1.068935	9.412126	37.80284
2011	27.49877	19.92207	7.859446	0.983167	9.383758	47.42085
2012	27.94933	20.16159	8.164598	1.188103	10.58794	48.11092
2013	26.75853	19.53787	7.174963	1.735419	9.245225	46.2964
2014	25.52442	18.98966	5.668755	1.468713	8.669053	44.51408
2015	24.74932	17.33667	5.872777	1.732764	7.888048	42.086
2016	21.30458	16.64972	6.727836		6.178361	37.9543