Original Research Article

How Do Net Exports and Remittances Impact on Economic Growth in Bangladesh? Insight from ARDL Time Series Model

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Abstract

This study delves into the intricate contribution of net exports and remittances on economic growth of Bangladesh with a focus of their impact on Gross Domestic Product (GDP). Net exports along with remittances are considered as key independent variables influencing the economic landscape of the country. The long-run and short-run effects of net exports and remittances on GDP are analyzed by conducting the Autoregressive Distributed Lag (ARDL) model over time period 1980-1922. The results of this study show that there is a positive effect of net export, remittance and gross capital formation on economic growth. On the other hand, all these independent variables have negative impact in short run and will adjust in long run significantly. As Bangladesh is a large remittance receiving country, export also increases in large volume by gross capital formation which increases domestic investment and output. The effects of remittances on GDP growth and exports on economic growth have each been the subject of much research, but independently. Buckling the payoff of exports and remittances on economic growth has not been studied. To fill this inane, we have tried to show how remittances and exports together boost economic growth. The findings contribute to a deeper understanding of the mechanisms through which net exports and remittance inflows shape economic outcomes in Bangladesh, offering insightful information to stakeholders and policymakers who are active in promoting sustainable economic development.
Keywords: Exports, Remittances, Economic Growth, ARDL, Time Series Model, Gross Capital Formation.
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1. INTRODUCTION

The economy of Bangladesh ranks as one of the most rapidly expanding countries. With its economy, which is the second largest in South Asia, it is ranked 35th in the world in nominal terms and 25th in terms of purchasing power parity (Correspondent, 2019) (Ahmed, 2022). From being a frontier market, it has been changing into a developing one. Both the World Trade Organization and the South Asian Free Trade Area encompass Bangladesh. Bangladesh's GDP climbed by 7.2% in the fiscal year 2021–2022, consequent to the global pandemic ("Economy of Bangladesh," 2024). Bangladesh is one of the emerging economies in the world., and such, its economy is being impacted by exports especially from ready-made garments (RMG), remittances, FDI, medicines, and other things (Akhter & Hasan, 2018) (Liton *et al*., 2017).

Exports provide foreign currency, which is required to pay for goods and services from the standpoint of international trade. Both theoretical and empirical explanations show a positive correlation between economic growth and global trade (Frankel *et al*., 1996). Exports play a crucial role in enabling investment and technology transfer that hasten the process of globalization (Bhagwati & Srinivasan, 1975). The positive impact of exports on Bangladesh's economy is evident in several areas. Firstly, the export sector has been a key driver of industrialization and urbanization. Bangladesh's economic growth has been mostly fueled by exports, particularly from the ready-made garment (RMG) sector, which makes up more than 84.58% of all exports in FY23 from the nation (Azran, 2024). Because to this industry's success, Bangladesh has become one of the top exporters of clothing worldwide, which has greatly increased GDP growth, foreign direct investment (FDI), created jobs, and reduced poverty (Berg *et al*.,

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2021). Export processing zones (EPZ) may help to earn foreign by boosting the export (Hasan & Ali, 2019). The gross domestic product (GDP) is a widely recognized indicator of a nation's overall economic activity. Imports and exports play a key role in the GDP calculation process using the expenditure method. Following is the GDP formula:

$$GDP = C + I + G + NX$$

Where:
C = Consumer Spending on Goods and Services
I = Investment Expenditure on Capital Goods
G = Government Spending on Public Goods and Services
NX = Net Export
Here, NX is net export which is the subtraction of import from export, i. e., (X-M)

Moreover, export growth has helped stabilize Bangladesh's foreign exchange reserves, providing a buffer against external economic shocks. This stability is crucial for maintaining a healthy balance of payments and supporting the country's import needs, particularly for raw materials, capital goods essential for production, and energy consumption. Bangladesh's energy sector is mostly reliant on traditional energy sources like coal, natural gas, imported crude oil, and refined petroleum products, with natural gas accounting for 61.82 percent of total electricity output. In this sense, Bangladesh may rely on renewable energy to generate power (Akter *et al*., 2022) and may abate the energy import.

In case of remittance, it is not unusual for people to migrate from Bangladesh to other countries. Since 1942, Bangladesh has had a lengthy history of international remittances and migration (Datta & Sarkar, 2014a). Remittances are the money that migrants, who work and reside overseas, send back to their family back home. Remittance can also be explained as a gift, payment, or debt between two individuals or businesses that involve the exchange of money. The term remittance has gained popularity in recent years to describe the financial support that migrant workers provide to their relatives back home as they earn elsewhere.

Remittances from employees have been the second-largest source of funding into the developing country since 1999, after foreign direct investment (Ratha & Xu, 2008). Bangladesh has grown rapidly, and since the early 1970s, it has exported most of its labor force to the Middle East and Southeast Asian nations, making it one of the world's top recipients of remittances. These monies have a significant impact on many facets of Bangladesh's development and the country's economic environment. Conversely, opportunities for employment in the Middle East and the implementation of an international hiring system in the mid-1970s allowed Bangladeshi workers to seek jobs overseas. During the 1980s and 1990s, economic globalization increased demand for migrant workers worldwide. (Slaugther &

Swagel, 1997). This external demand opened up scope for a large number of semi-skilled and less skilled Bangladeshis to go abroad as migrant workers.

The average yearly rate of increase in remittance inflows to Bangladesh between 1979 and 2008 was 19 percent (Hussain & Naeem, 2009). About 7.1 million people temporarily left Bangladesh between 1976 and 2010. Since 2009, the amount of money that emigrants have sent home annually has exceeded $10 billion, or slightly more than ten percent of the GDP. A few years ago, Bangladesh rose to the position of one of the top ten recipients of remittances worldwide, following Nigeria, Egypt, Poland, India, China, Mexico, and the Philippines (Ratha & Xu, 2008). As stated by the authority of Bangladesh Bank (BB), in FY 2022-23, remittances came to US$21.6 billon constituting the largest remittance collected up until now. It is noteworthy that a significant portion of remittances are not reported. Between 50 and 200 percent of remittances that are formally documented are thought to be unrecorded (Aggarwal *et al*., 2006).

The hyperlink between remittances and economic growth is gaining increasing attention from scholars, economists, and policymakers. Remittances are generally seen as a source of income for recipient households, but there is still room for discussion and empirical research regarding their wider effects on the macroeconomic performance of receiving nations, particularly with regard to economic growth.

On the other hand, we cannot ignore the negative impacts of remittances on the economy. There are many things to say about the negative impacts. Overreliance on remittances can create a dependency on external sources of income. This could make it more difficult for the nation to diversify its economy and encourage complacency in homegrown industry development.

Domestic currency may appreciate by the contribution of Remittances. This may result in a situation known as the Dutch Disease, when other export-oriented businesses become less competitive on the international market. Consequently, the nation can grow unduly reliant on remittances and disregard the growth of other industries. Remittance inflows have the ability to boost consumer spending, which in turn may raise demand for products and services. Economic inflationary pressures could arise if domestic production is unable to meet the heightened demand. Remittances may unevenly distribute wealth, exacerbating income inequality between those with access to remittances and those without. Skilled workers migrating for better opportunities abroad can result in a loss of valuable human capital, impeding innovation and economic development which can make the situation of "brain drain".

Realizing that remittances have a complicated effect on economic growth is crucial, and these drawbacks should be taken into account in addition to their benefits. In order to harness the benefits of remittances and maintain sustainable economic development, policymakers in Bangladesh must find a middle ground and put mechanisms in place to lessen these possible negative effects.

2. LITERATURE REVIEW

Though several researches have examined the impact of export or net export using various theoretical approaches, the theoretical foundation of this study is anchored on the literature discussed below:

The statistical data about Bangladesh's recent economic growth rates in terms of imports, exports, and gross domestic product is presented and discussed in article(Islam, 2019). This study demonstrates the nation's transformation from its historical reliance on agriculture to a new tiger economy. On the other hand, it appears prudent to pursue a more balanced growth model that includes a wide basket of exports, as an over-reliance on exports of ready-made clothing is considered to be hazardous.

In order to address the key dispute over export-led economic performance, reference (Muhamadiev, 2019) looks at time series data to study how exports responded to Bangladesh's economic expansion from 1980 to 2018. This research finds a unidirectional causal association between export and economic growth using the Granger Causality test; however, there is no causal relationship between economic growth and export and terms of trade. Furthermore, a bidirectional causal relationship between export and terms of trade is revealed by this study.

Reference (Usman *et al*., 2012) examine the substantial effects of exports, government spending, and educational spending on the development of Luxembourg's developed economy—a member of the European Union from 1975 to 2009. This research, which considers Luxembourg's economy, uses the fundamental ordinary least square approach to determine the meaningful correlation between export and growth. The results of the experiment show that exports, government spending, and educational spending all significantly positively relate to economic growth. This article also delineates the correlation between export and economic growth.

Reference (Constantinescu *et al*., 2017) looks at how net exports affect the growth of the US economy (USA). Secondary data collected between 1970 and 2015 was analysed using a Vector Error Correction Model (VECM). The study's findings demonstrated that net exports and economic growth in the United States are long-term co-integrants. It was shown that

unemployment and import levels had a negative relationship with economic growth.

Reference (Selvanathan *et al*., 2020) investigates the causal link between trade and economic growth in Bangladesh from 1970 to 2017 by utilizing the Autoregressive Distributed Lag (ARDL) framework and focusing on how exports and imports affect economic growth or vice versa. With relation to Bangladesh, their empirical findings are consistent with the widely accepted theories of growth-led exports and export-led growth. It's interesting to note that they discover evidence of both import-led development and some reverse causation, meaning that imports expand as the economy grows.

In the context of Bangladesh, remittances have been the focus of a great deal of research because they are an important source of outside funding. Researchers have looked at a number of aspects of the connection between remittance inflows and economic growth, illuminating both the advantages and disadvantages for the national economy.

(Golder *et al*., 2023) Examined the connection between economic growth, inward remittances, and financial advancement, assuming a symmetric relationship between the variables and ignoring the potential for an asymmetric relationship. The Nonlinear Autoregressive Distributed Lag (NARDL) model is used in this article to analyze time series data spanning 1988 to 2020. The study's novel conclusions include the following: Bangladesh's economic growth is facilitated by remittances and both positive and negative fluctuations in financial advancement.

(Majumder & Donghui, 2016) Looks at how remittances affect Bangladesh's economic growth over the long run. In order to investigate the connection between remittances and the nation's economic growth, they employed dynamic linear regressions or Autoregressive Distributed Lag (ARDL) models, which are extensively utilized. The ARDL model indicates that there is a significant long-term positive association between remittances and GDP growth in Bangladesh. Similarly, (Hasan *et al*., 2019) also find a positive association between remittances and economic growth.

(Olayungbo & Quadri, 2019) Used a panel of 20 sub-Saharan African countries to examine the relationships between remittances, financial development, and economic growth between 2000 and 2015. Panel unit root and cointegration tests were used in the study, in addition to pooled Mean Group and Mean Group/ARDL estimations. It has been demonstrated that remittances and financial development have positive short- and long-term benefits on economy.

According to (Datta & Sarkar, 2014b) remittances have expanded dramatically in Bangladesh

during the past 20 years, reaching over 10% of GDP since 2008. Remittances can prevent balance of payments crises and promote growth and development, but they can also hinder progress if they are utilized for wasteful or ostentatious purposes. The goal of this research was to examine how remittances affect Bangladesh's economic growth through the application of time series econometric tools, particularly the auto regressive distributed lag (ARDL) framework.

(Mamun & Kabir, 2023) Employed annual data from 1976 to 2019 to empirically investigate the impact of both external and internal factors on Bangladesh's economic growth. The dynamic effect and cointegration were identified using ARDL bounds testing. As FDI plays a detrimental role in the process of economic growth (Akhter & Hasan, 2018), while exports and remittances play a major beneficial role, this study primarily identified the positive and negative casualties.

Researchers also got through their study that remittance does not have any impact on economic growth. For example, according to (Barajas *et al*., 2009), Undoubtedly, remittances benefit recipient households by lowering poverty and boosting consumption, but whether they also contribute to long-term economic growth is an important matter of empirical research. By addressing the primary flaws in earlier empirical research and emphasizing adequate measurement, this study tackles the subject at hand. It also incorporates an instrument that is both connected with remittances and would only be anticipated to affect growth through its effect on remittances. The findings imply that worker remittances have no effect whatsoever on economic growth.

3. METHODOLOGY AND RESEARCH DESIGN

3.1 Empirical Framework

In this study, impact of net export (NX) and remittances (REM) on economic growth is investigated along with the variable gross capital formation (GCF). Here, Net Exports (NE) is calculated by subtracting imports from exports (X − M). All of the data were collected from WDI of time series 1980-2023. To examine the implications of remittances on GDP growth, the econometric model that we have designated is as follows:

$$GDP_t = \beta_0 + \beta_1 REM_t + \beta_2 NX_t + \beta_3 GCF_t + \mu_t \quad (1)$$

Where t represents a time period indicator and μ_t represents the stochastic term, GDP denotes gross domestic product, REM is remittance, NX is net export and GCF is gross capital formation. Here β_0 is constant where β_1, β_2, β_3 are slope of the respective independent variables.

3.2 ARDL Model Estimation

This research employs an econometric approach, specifically utilizing the Autoregressive Distributed Lag (ARDL) modeling technique introduced by (H. Pesaran & Shin, 1995) (M. H. Pesaran *et al*., 2001) (Dickey & Fuller, 1979) to investigate how net exports and remittances have affected Bangladesh's economic development. This research uses the Augmented Dickey-Fuller and Phillips-Perron unit root tests, two commonly used unit root screen techniques, to identify the integration sequence and confirm the stationarity of the data(Dickey & Fuller, 1981). This study was favored over conventional techniques, such as the Engle and Granger methodology (Engle & Granger, 1987) and Johansen co-integration tests (Johansen, 1991), since it provides relaxation to certain assumptions that other conventional techniques do not.

To explore the relationship among net exports, remittances and economic progress we derives the following ARDL model-

$$\Delta GDP_t = \beta_0 + \gamma_0 GDP_{t-i} + \gamma_1 NX_{t-i} + \gamma_2 REM_{t-i} + \gamma_3 GCF_{t-i} + \sum_{i=1}^{p_1} \beta_{1i} \Delta GDP_{t-i} + \sum_{i=0}^{p_2} \beta_{2i} \Delta NX_{t-i} + \sum_{i=0}^{p_3} \beta_{3i} \Delta REM_{t-i} + \sum_{i=0}^{p_4} \beta_{4i} \Delta GCF_{t-i} + u_t \quad (2)$$

Here,
H_0: $\gamma_0 = \gamma_1 = \gamma_2 = \gamma_3 = 0$ (no cointegration)
H_1: $\gamma_0 \neq \gamma_1 \neq \gamma_2 \neq \gamma_3 \neq 0$ (cointegration exists)

In equation (2), β_{1i}, β_{2i}, β_{3i} and β_{4i} represent the short-run coefficients of GDP, NX, REM, and GCF, respectively, while Δ stands for the first difference operator. The residual term is indicated by u_t, while the optimal lag duration is represented by $p_1 - p_4$.

To explore the long-term association between the variables, F statistics are required. (M. H. Pesaran *et al*., 2001) proposed two kinds of critical standards that must be compared: upper bound I(1) and lower bound I(0). The existence of long-run affiliation between variables is shown by the H_0 of no cointegration, which cannot be accepted if the result of F statistics >I(1). The H_0 of no cointegration is confirmed if the measurement of F statistics < I(0), this implies that the variables' long-term relationship is not included. On the other hand, when the findings of F statistics falls between the critical values of I(1) and I(0), an inconclusive result is obtained.

The next step is to ascertain the short-run association with the error correction term if the long-term affiliation between the variables is confirmed. The short-run relationship between the variables and the ECT are represented by equation (3).

$$\Delta GDP_t = \beta_0 + \sum_{i=1}^{p_1} \beta_{1i} \Delta GDP_{t-i} + \sum_{i=0}^{p_2} \beta_{2i} \Delta NX_{t-i} + \sum_{i=0}^{p_3} \beta_{3i} \Delta REM_{t-i} + \sum_{i=0}^{p_4} \beta_{4i} \Delta GCF_{t-i} + \delta_1 ECT_{t-i} + u_t \quad (3)$$

Where, the lagged error correction term is shown by ECT$_{t-i}$ and the adjustment speed is represented by δ_1. By ECT term, it is shown how long it will take to adjust to the long run equilibrium if there is an economic shock in the short run. In order to proof this, the ECT value needs to be statistically significant and negative. Lastly, a few stability and diagnostic tests are carried out to see if the model fits correctly. The CUSUM and CUSUM-SQ tests, serial correlation, and heteroscedasticity are among the tests.

3.3 Data Sources and Types
The research is quantitative and analytical in nature. To examine the objectives of this study, secondary data are used. As secondary data is more accurate, credible, and convincing than primary data, it allows saving a significant amount of time. The time series data are collected from World Development Indicator (WDI) for analysis for the period from 1980 to 2023. This is to inform that the variable Net Export is founded by deducting import from export data from WDI.

Table 1: Functional Relationship and Sources of Data

Name of the Variables	Types of the Variables	Measurement Units	Source of Data
Gross Domestic Product (GDP)	Dependent	Annual percentage growth	WDI(2023)
Remittances (REM)	Independent	As percentage of GDP	WDI(2023)
Net Export (NX)	Independent	Annual percentage growth	WDI(2023)
Gross Capital Formation (GCF)	Independent	Annual percentage growth	WDI(2023)

Source: Author's creation

4. RESULTS AND DISCUSSION
The ARDL framework is dependent upon the stationary properties of the time series data. Thus, we must first look at the integration order. We must ensure that the model's variables are not I(2) stationary in order to prevent erroneous results. For this purpose, to determine if the data series is stationary or not, we do the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests. The alternative hypothesis for the ADF and PP tests is the absence of a unit root, which implies that the data series is stationary. In this case, each variable is evaluated at various levels, with the initial difference being tested at the constant level.

4.1 Stationarity Test

Table 2: Unit Root Test Results:

Level I(0)				First difference I(1)			
Variable	ADF		PP		ADF		PP	
	C	CT	C	CT	C	CT	C	CT
GDP	-5.3819 ***	-9.2328 ***	-5.6365 ***	-9.0242 ***	-8.6154 ***	-8.5078 ***	-24.7809 ***	-24.497 ***
NX	-10.6674 ***	-10.9835 ***	-10.6027 ***	-14.8406 ***	-7.6430 ***	-7.5737 ***	-49.4380 ***	-51.552 ***
REM	-1.6154	-3.6382 **	-1.5036	-1.1603	-4.4531 ***	-4.5482 ***	-4.4618 ***	-4.5127 ***
GCF	-5.0071 ***	-4.8715 ***	-4.9656 ***	-4.8111 ***	-7.8968 ***	-7.9846 ***	-9.5129 ***	-9.8453 ***

Statistics at the 1%, 5%, and 10% levels are indicated by the symbols ***, **, and *, respectively. The symbols C and CT stand for constant and constant with trend, respectively.

Table 2 presents the findings from ADF and PP analyses conducted to verify the stationarity of every variable. The ARDL model can be applied as the results of ADF and PP indicate that none of the variables are stationary at second difference I(2). Even all the variables are stationary at level without remittance. However remittance is also stationary at first difference.

4.2 Optimum Lag Selection
Lag order selection criteria is indicated by table 3. Five widely used lag order selection techniques are used to choose an appropriate lag for the dependent and independent variables.

Table 3: Optimal Lag Order Selection

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-384.8244	NA	3260.879	19.44122	19.61011	19.50228
1	-327.1874	100.8648	408.7556	17.35937	18.20381*	17.66469*
2	-314.7400	19.29341	501.1091	17.53700	19.05699	18.08658
3	-290.0387	33.34675*	346.6261*	17.10193*	19.29748	17.89577

Source: Author's creation

The most reliable and used method of optimum lag selection is AIC method. AIC method is also used here to select optimum lag which is lag order 3.

4.3 ARDL Bounds Test for Cointegration
After the variables are verified to be integrated at the lag order three, the ARDL bounds test for cointegration is applied to ascertain whether the variables are cointegrated.

Table 4: ARDL Bound Test

F-Statistic: F = 4.813574	H_0 =no level relationship	
Significance	I(0) Lower Bounds	I(1) Upper Bounds
10%	2.37	3.2
5%	2.79	3.67
2.5%	3.15	4.08
1%	3.65	4.66

Source: Author's creation

The result of the F-test is 4.813574. The calculated F-statistics is greater than the upper bound level, I (1), at a 1% significant level. So, we may reject the null hypothesis of no level relationship among variables. The F-bound test suggests a long-term relationship exists between our model's endogenous and explanatory variables.

4.4 Long-Run Analysis
As there is a co-integration among the variables, by using ARDL, we may therefore estimate the long-term relationship.

Table 5: Result of long run relationship

Independent Variables	Coefficients	Std. error	t-Statistic	Prob.
NX	0.087925	0.047649	1.845238	0.0749
REM	0.256963	0.110470	2.326079	0.0270
GCF	0.381862	0.177395	2.152616	0.0395
C	1.091066	1.289364	0.846205	0.4041

Source: Author's creation

Table 5 shows long-term relationship that NX has a positive, credible ($p < 0.01$) impact on GDP. It implies that greater GDP growth rates are correlated with increased net exports, and that GDP growth is what drives Bangladesh's economic development. More specifically, a 1unit increase in net exports spurs economic growth by increasing the GDP growth rate by 0.087925units. Furthermore, this outcome offers empirical backing for several earlier research projects, such as references (Constantinescu *et al*., 2017) (Shah, 2023) (Hasan *et al*., 2019). REM is another variable that has been demonstrated to have a positive and substantial ($p < 0.01$) impact on GDP. This means that a one unit increase in remittances will result in a 0.256963units increase in GDP which is supported by the reference (Majumder & Donghui, 2016). Lastly our control variable GCF, i.e., gross capital formation also has positive impact on GDP and its 1unit increase boosts economic growth by 0.381862 units significantly ($p < 0.01$).

4.5 Short Run Result
Table 6 exhibits the results of estimated short run model.

Table 6: Findings of short-run ARDL

| Variable	Coefficient	Std. Error	t-Statistic	Prob.
$\Delta GDP(-1)$	-0.398337	0.134193	-2.968384	0.0058
$\Delta GDP(-2)$	-0.267404	0.112605	-2.374708	0.0242
ΔREM	-0.109786	0.194788	-0.563617	0.5772
$\Delta REM(-1)$	-0.037482	0.193505	-0.193698	0.8477
$\Delta REM(-2)$	-0.535632	0.185466	-2.888031	0.0071
ECT(-1)*	-0.551480	0.105592	-5.222731	0.0000

Source: Author's creation

From the estimate, all the coefficients of the variables are negative. Coefficients indicates that there is negative impact of remittance in the short run. To verify the validity of the long-term results and to evaluate the short-term correlation between the variables, this study uses ECT. The ECT term is negative and statistically significant ($p < 0.01$), indicating that each annual adjustment of GDP is made by 55.15% if there is any economic shock from the short- to long-term perspective.

4.6 Diagnostic Test
a) Normality Test
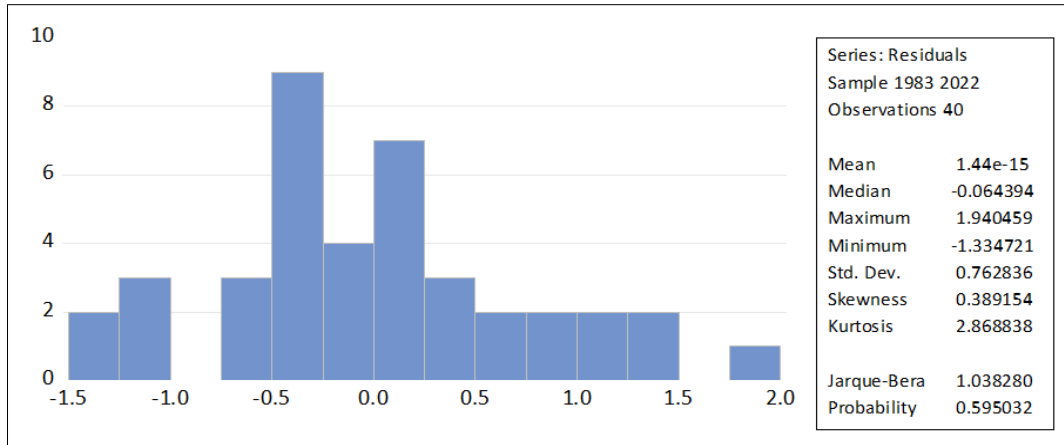
Figure 1: Histogram

From the normality test we see that the data is normally distributed. As the p-value is higher than 0.05, so the data is normally distributed.

b) Heteroskedasticity

Table 7: Heteroskedasticity test (Breuch-Pagan)

F-statistic	0.874273	Prob. F(9,30)	0.5580
R-squared	8.311354	Prob. Chi-Square(9)	0.5031

Source: Author's creation

From this table 7, we get the p value of the χ^2 is greater than 5% by 0.5031. Thus, null hypothesis is accepted. So this model has no heteroskedasticity problem.

c) Autocorrelation Test

Table 8: Serial Correlation LM Test

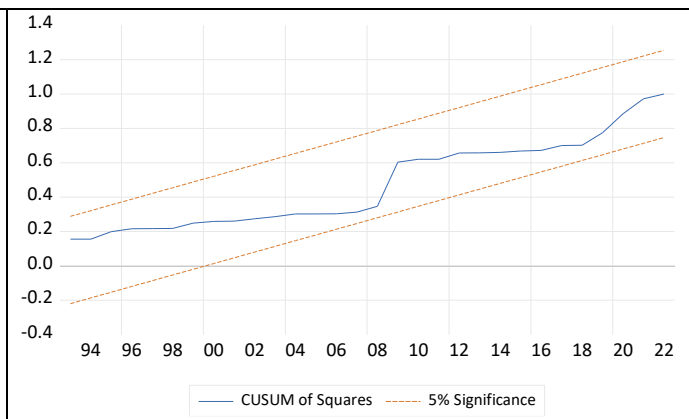| F-statistic	0.269476	Prob. F(3,27)	0.8468
R-squared	1.162854	Prob. Chi-Square(3)	0.7619

Source: Author's creation

This research ensures the non-existence of autocorrelation problem, as the p-value of χ^2 of LM test is 0.7619, which is more than 0.05.

d) Stability Test:
Cumulative sum (CUSUM) is used to test model misspecification and the stability of the regression model.
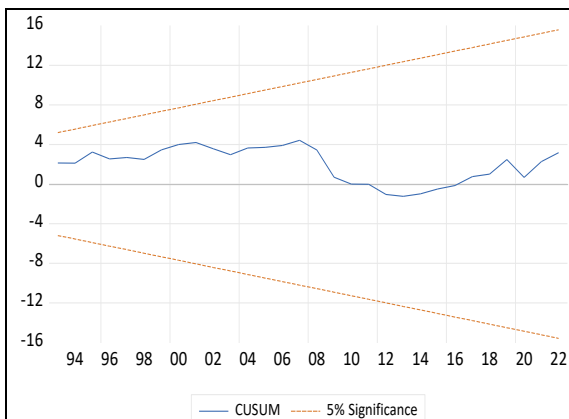
Figure 2: CUSUM Test	*Figure3: CUSUM Square Test*

Source: Author's Creation

Figure 2 indicates the graph of CUSUM and figure 3 indicates the graph of CUSUM Square. To investigate the stability of coefficients of the long run and short run ARDL CUSUM and CUSUM Square test are applied. In these figures both CUSUM and CUSUM Square test are structurally stable as they are situated between the two critical lines.

Correlation among the Variables

Table 8: Correlation Table

Variables	GDP	REM	GCF	NX
GDP	1.000000			
REM	0.497664	1.000000		
GCF	0.225890	-0.042896	1.000000	
NX	0.287136	0.030341	-0.244147	1.000000

Source: Author's Creation

Table 8 shows the correlation among the dependent and independent variables. Independent variables are also correlated with each other but of course they are weakly correlated. Remittances and gross capital formation are negatively and very weakly correlated where the all other variables' correlations are positive.

5. CONCLUSION

This research aimed to explore the impact of net exports and remittances on economic growth in Bangladesh, utilizing the Autoregressive Distributed Lag (ARDL) model. The study also examined the influence of gross capital formation on the country's economic performance. The findings of this study suggest that net exports have a statistically significant positive association with economic growth. The estimations from the ARDL model also showed that remittances had a statistically significant beneficial effect on Bangladesh's economic growth. The Error Correction Term (ECT) in the ARDL model means the speed at which deviations from the long-run equilibrium are rectified in response to shocks. The negative and significant coefficient of the ECT suggests a strong tendency towards equilibrium in the system, implying that any discrepancies between actual and equilibrium GDP levels are adjusted for relatively quickly over time.

This research underscores the significant contributions of net exports, remittances, and gross capital formation to the economic growth of Bangladesh. Bangladesh is going to graduate from the Least Developed Country (LDC) category in 2026, which brings with it both opportunities and problems.(Rahman, 2024) Although it represents economic growth, it also denotes the loss of benefits from preferential trade, which may have an effect on export competitiveness. Bangladesh will need to diversify its export market, enhance manufacturing efficiency, and tighten its trade policies in order to lessen these effects. The inclusion of net exports and gross capital formation as independent variables allows us to assess the complementary effects of these factors on economic growth. Our findings reveal that net exports and gross capital formation also play crucial roles in driving GDP growth in Bangladesh, highlighting the importance of trade dynamics and domestic investment in sustaining economic expansion.

The regulatory environment and trade policies of Bangladesh have an effect on how well exports propel economic growth. High non-tariff obstacles, intricate regulatory processes, and protective tariffs might make Bangladeshi exports less competitive on the international market. Reforming legislation to address these problems could improve trade efficiency and increase export prospects outside of the RMG industry. But there are drawbacks to depending so much on exports, particularly from the RMG industry. Due to its reliance on imported raw materials, the industry is susceptible to disruptions in the global supply chain and fluctuations in prices. Furthermore, there are dangers to long-term sustainability and economic diversification from the high export concentration in a single industry.

The findings highlight the need for policymakers to adopt measures that facilitate the inflow of remittances, promote export-oriented strategies, and encourage domestic investment to sustain robust and inclusive economic development.

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