The Effects of FDI on Economic Growth and Export Performance of Bangladesh

Jasmin Aktar\textsuperscript{a}, Md. Touhidul Islam\textsuperscript{b}*\textsuperscript{,} Mst. Tahmina Sultana\textsuperscript{c}

\textsuperscript{a,b}Senior Lecturer, Department of Business Administration, Gono Bishwabidyalay, Savar-1344, Dhaka, Bangladesh
\textsuperscript{c}Assistant Professor, Department of Sociology and Social Work, Gono Bishwabidyalay Savar-1344, Dhaka, Bangladesh

\textsuperscript{a}Email: jasmingb4@gmail.com, \textsuperscript{b}Email: touhid.finance.ru@gmail.com
\textsuperscript{c}Email: tahminagono@gmail.com

Abstract

Bangladesh is a rising star in the South Asian region, performing significantly better on different economic metrics, but substantial industrialization is required to keep it going. The greatest approach to meet its development needs is through foreign direct investment (FDI). This study's objective is to assess how FDI has affected Bangladesh's export performance and economic growth. To achieve the goal, statistical analyses of the links between Bangladesh's economic growth rate, export performance, and FDI inflow were done for this article. A 20-year data set from 2001 to 2020 was evaluated for the study using simple linear regression analysis. According to the conclusions of the study, there is a constructive connection between successful exports and the expansion of the Bangladeshi economy. Therefore, the policy framework of the Bangladesh Government should be more flexible and lucrative to attract continuous FDI inflow in Bangladesh.

Keywords: FDI; Economic Growth; Export; SDGs; Bangladesh.

1. Introduction

Now, undoubtedly Bangladesh is the country of global attention for its remarkable economic development in the South-Asian region. Bangladesh is doing much better by implementing various development agendas over the last few years. After achieving several targets of MDGs in 2015, Bangladesh is on the road to achieving its targets of SDGs by 2030. For the achievement of such a development agenda, Bangladesh needs continuous growth and development in various economic sectors that vastly depend on huge investments, but as a developing country, it is tough to raise funds or capital from internal sources.
So, external sources like foreign debt, foreign aid, and foreign direct investment would be suitable sources. Since foreign debt has some limitations, especially because it has to repay with interest considering strict rules and regulations. That is why foreign direct investment may be the best one as an external source of capital. Economic growth is a problem for Bangladesh's development. An economic growth tool, especially for Bangladesh, is foreign direct investment (FDI) (10, 17).

More FDI inflows are likely to be advantageous for Bangladesh. Bangladesh must therefore create an environment for investment that can increase FDI inflows [2]. Industrial organization economics, the theory of the company, and economics of internalization have dominated the theory of foreign direct investment (FDI), with a focus on market structure or the firm. Surprisingly, it has not been defined in terms of a theory of economic development (how FDI helps structural upgrading and economic growth), despite TNCs' key position as generators and transplanters of technology, skills, and linkages to the world market [34]. Large amounts of foreign direct investment (FDI) have been flowing into developing countries. Furthermore, FDI has become the most significant source of external funding for developing economies; it is a crucial medium for the transfer of technology from advanced to developing nations; it stimulates local capital investment; and it paves the way for enhancements in the human capital stock and institutions of host nations [33].

Foreign direct investment's impact on GDP growth has been studied extensively throughout the years. Foreign direct investment (FDI) is crucial to economic growth, but not all policymakers have a firm grasp on the theoretical connection between FDI and GDP expansion [35].

In this study, regression analysis is used to investigate how foreign direct investment (FDI) has influenced Bangladesh's export performance along with economic growth, in addition to the FDI restrictions that Bangladesh ought to put in place in order to attract foreign investors. The paper includes various recommendations that could be implemented to boost FDI growth in Bangladesh.

2. Problem Statement

Financial capital is crucial for a country's economic development and progress since it is employed in the production sector to speed up the development process.

No matter where it comes from - from the internal source or the external source of funds of the respective country. Both sources of funds are important for any country to implement a development plan. For developing countries like the Bangladesh external source of funds, especially FDI is vitally important as it has some limitations to raising funds from internal sources.

There are a lot of reasons to attract FDI within the country; boosting economic growth and export performance are two of the many. The present government is highly concerned to attract the FDI flow to overcome the financial shortcomings within the country. That is why; if it is possible to assess properly the effects of the current FDI flow concerning economic growth and export performance of Bangladesh, the policy-making body will be able to take more fruitful and effective decisions on FDI.
3. Study Objectives

The study's primary goal is to examine how FDI has changed Bangladesh's export performance and economic growth. Other minor goals of the study include the following to achieve the main goal:

- To determine the current trend of the FDI status of Bangladesh
- To determine how Bangladesh's export performance and economic growth are related to the country’s present FDI inflow

4. Literature Review

The study examines several theories, elements of variables, and the empirical data presented here.

4.1. Theoretical Review

In this section, the ideas that serve as the study's theoretical framework for factors like FDI, economic growth, export performance, etc. were mostly discussed.

- **Foreign Direct Investment (FDI)** - The term "foreign direct investment" literally indicate the amount of investment made by investors outside of their country's borders. According to the research [11] a sort of international investment called foreign direct investment (FDI) aims to transfer long-term gains from an investor in one nation to another. According to research [18] to create long-lasting and stable links between economies FDI works as a key element in international economic integration.

- **Economic Growth** - A rising economy is one that increases in size over time. The market value of all of the final goods and services generated in a country is the Gross Domestic Product (GDP), which is commonly used as a proxy for the size of a country's economy. Both nominal and real measures of economic growth are available [23]. Every time individuals shift resources to increase their value, economic growth occurs [24].

- **Export Performance** - When goods and services are produced domestically, but are sold to other countries is known as an export. Export indicates solvency and that is why countries try to perform better for export concerning issues like- growth in sales, profit, activities, and operations [31].

4.2. Empirical Review

In this section, important readings related to the topic are highlighted. In Bangladesh, FDI plays an imperative part in accomplishing anticipated financial development. FDI streams have been effective in expanding GDP. Bangladesh's wage scale will also be increased concurrently, according to FDI's guarantee. To ensure that Bangladesh sees greater growth, FDI can ensure that the country can make most use of all resources. There is a growing tendency to outside speculation due to the positive effects of the aforementioned driving forces and changes to our financial arrangements. FDI benefits the GDP, exports, and individual speculation [29, 19, 14, 20, 9, 7, 32, 13, and 21]. When domestic reserve funds are inadequate, the economic expansion is significantly influenced by FDI [4]. A country's economic condition may be transformed by FDI within a very short time as it
is not just a strategic option, however a crucial component of any country's overall economic growth. That is why most countries try to attract foreign investors by offering various incentives like congenial investment and business environment, fiscal reforming, and so on [15]. Bangladesh has several features that can attract investment from different countries. Bangladesh must begin implementing a variety of effective promotion strategies to persuade potential investors that their involvement in business operations in the country is valued, that they will be subject to friendly regulatory requirements, and that they are able to benefit economically from opportunities for investment that are comparable with those provided by other countries in this region [12]. It is widely believed that FDI plays a significant influence in the transfer of technology from the home country to the host country. When an organization in one country acquires the means to access and implement the technical data of an organization in another country, this is known as technology transfer (TT) [37]. Generally, we can argue that the FDI policies of all South Asian nations have improved. These low-income economies have realized that FDI not only provides a reliable supply of credit but also significantly aids in the development of their economy [25]. The governing authority of Bangladesh is responsible for maintaining the nation's political stability, in addition to the financial inducements it offers to encourage foreign direct investment (FDI) inflows. Investors must maintain their investments securely and without incident. Despite the numerous agreements that Bangladesh has with other nations, they will not be successful until the Government and the opposition political parties collaborate. To pinpoint any loopholes in our foreign direct investment policies, the government ought to compare and contrast our FDI policies with those of other prosperous nations' FDI policies [3]. More FDI inflows are likely to be advantageous for Bangladesh. Therefore, Bangladesh must create an environment for investment that will increase FDI inflows [8]. The empirical findings demonstrate the distinct short- and long-term correlations between Bangladesh's economic development and direct investment from abroad [5]. It is widely accepted that FDI, or foreign direct investment, is a key contributor to the development of emerging economies. This study examines the role that FDI played in the expansion of Cambodia's economy from 2006 to 2016 using time series data. The data was examined using multiple regressions and the correlation matrix. The results of this study show that Foreign Direct Investment (FDI) contributes to Cambodia's economic growth in a positive way [28]. It is considered that foreign direct investment (also known as FDI) can influence economic growth in two distinct ways: directly, by fostering the production of fixed assets; and indirectly, by increasing the amount of available knowledge. The conventional wisdom holds that foreign direct investment (FDI) will have an immediate impact on economic expansion since its primary function is to support the domestic economy and fill the voids left by deficits in capital and investment [27]. The evidence suggests that foreign investment contributes positively to economic expansion. The level of foreign direct investment (FDI) has less of an impact on overall economic growth than it does on growth in specific industries. Several empirical researches showed that overseas capital is critical to maintaining economic expansion. Foreign direct investment has the potential to increase GDP via increasing economic output and jobs [16, 1]. World Bank projections put Bangladesh's GDP at $324.24 billion in 2020, up from $53.37 billion in 2000. This represents an increase of over six fold in absolute terms [6]. According to the study, the IV model's per capita growth might increase by 1.65 to 6.05% points if FDI increases by 1% [22]. Study reveals that FDI should be used more frequently in capital-intensive public-private partnership projects rather than just infrastructure development, and the banking industry's credit management policies should also be improved [26]. FDI and remittances have less of an immediate impact on Bangladesh's real GDP in the short term than exports do [20]. Given the mutually
reinforcing nature of FDI and sound financial markets, policymakers should work to improve domestic conditions and alleviate constraints such as those limiting firms' access to credit, with a particular focus on the industries most likely to be impacted by the entry of foreign firms (i.e., those in direct competition with one another and those that are vertically related) [39]. This research article examines the connection involving FDI, domestic investment, trade openness, and economic expansion from the perspective of Bangladesh using time series data spanning the years 1972–2011. The significance of the Lagged Response Variable in this study, followed by an analysis of the F-statistics, demonstrates that the control variables are jointly significant because all of the P-values in the models that produced results that were notably favorable from Bangladesh's perspective are less than 0.01 [30]. Natural resources or factor endowment wealth are not determining determinants of competitiveness in today's global market. Because of the ever-changing nature of international competition, nations wishing to boost their standing must constantly innovate new technology and products. Foreign direct investments (FDI) have increased the value of R&D and innovation, which in turn increases the value of the products that can be made. Foreign direct investments (FDI) are essential to developing economies because they bring much-needed resources such as money, technology, and experience [38].

5. Methodology

The study employed a descriptive research approach with quantitative variables to determine how FDI flows affect Bangladesh's economic growth and export performance. Data was collected from secondary sources like the World Bank, OECD, BBS, various news portals, etc. The FDI, GDP growth rate, and Export data for Bangladesh were extracted from the World Bank and cover the period from 2001-2020. Utilizing straightforward linear regression analysis, data were examined. Below is the simple linear regression model:

\[ Y_1 = \beta_0 + \beta_1 X_1 + e \]

Where:
- \( Y_1 \) = Economic Growth of Bangladesh (Annual GDP growth rate)
- \( \beta_0 \) = Constant
- \( \beta_1 \) = Beta coefficients
- \( X_1 \) = Annual FDI inflow
- \( e \) = Error Term

\[ Y_2 = \beta_0 + \beta_2 X_2 + e \]

Where:
- \( Y_2 \) = Export Performance of Bangladesh (Annual Export)
- \( \beta_0 \) = Constant
- \( \beta_2 \) = Beta coefficients
- \( X_2 \) = Annual FDI inflow
- \( e \) = Error Term

6. Discussion and Analysis

FDI can boost Bangladesh's exports and economic growth. FDI can contribute essential cash, technology, and managerial knowledge, boosting economic growth through infrastructure development, job creation, and productivity. Multinational organizations can also increase territorial firms' export performance by transferring technology. FDI boosts jobs and living standards. Knowledge and technology spillovers from foreign investors to domestic enterprises can enhance the economy. Bangladesh must strengthen its institutional quality, infrastructure, human resources, and business environment to attract and retain more foreign investors to maximize FDI benefits. A brief description of the findings of inferential statistics is presented in this section. To
evaluate the effects of FDI inflow on Bangladesh's economic development and export performance, the researchers carried out a simple linear regression study. The researchers utilized SPSS-23 to enter the data and compute the measurements of the simple linear regression for the investigation, and the P-values were taken into account at a significance level of roughly 5%. The following tables present the results;

**Table 1: Model Summary.**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Estimate's Standard Error</th>
<th>Change Statistics</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.549a</td>
<td>.301</td>
<td>262</td>
<td>1.06941</td>
<td>.301</td>
<td>7.761</td>
<td>1</td>
<td>18</td>
<td></td>
<td>.012</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Annual FDI Inflow

Table 1 shows the coefficient of determination, which measures the extent to which one change in the independent variable (Annual FDI inflow) explains the variance of the variable that is dependent (Economic Growth of Bangladesh (Annual GDP growth rate)). According to the R² statistic, the independent variable under study accounts for 30.1% of the variation in Bangladesh's yearly FDI influx when it comes to economic growth. This shows that other variables not examined in this study account for 69.9% regarding the dispersion of the dependent variable. To ascertain the significance of FDI in driving Bangladesh's economic growth, more research should be conducted.

**Table 2: ANOVA.**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>8.876</td>
<td>1</td>
<td>8.876</td>
<td>7.761</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>20.586</td>
<td>18</td>
<td>1.144</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>29.462</td>
<td>19</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Economic Growth of Bangladesh (Annual GDP growth rate)
b. Predictors: (Constant), Annual FDI Inflow

Findings from the previously mentioned Table 2: The annual FDI influx provides the best explanation for Bangladesh's economic performance, according to an ANOVA Table. The P value is 0.012, which is less significant than 0.05 at this level. As a result, the model generally accounts for the data.
The following regression function is taken from the aforementioned Table 3: Coefficients Table:

\[ Y_1 = 5.044 + 0.770X_1 \]

Where: \( Y = \) Economic Growth of Bangladesh (Annual GDP growth rate), \( \beta_0 = \) Constant, and \( X_1 = \) Annual FDI Inflow. When all other factors are held constant, the beta coefficient shows the change in Bangladesh's economic growth that result from a shift with one unit as in dependent variables. Bangladesh's GDP changes by 0.770 percentage points for every one unit shift in annual FDI inflow, assuming no other variables change.

The aforementioned example shows how the independent variable (Annual FDI Inflow) significantly boosts Bangladesh's economic growth (Annual GDP growth rate).

Table 4: Model Summary.

Table 4 displays the coefficient of determination, which shows how much volatility in the dependent variable (Export Performance of Bangladesh, Annual Export) can be attributed to changes in the independent variables. The level to which fluctuations in the independent variable reflect shifts in the dependent variable is the dependent variable.

The independent variable is the annual FDI influx. According to the R2 statistic, the yearly FDI inflow is the independent variable responsible for 69.4% of the variance in Bangladesh's export performance. This means that factors outside this inquiry may explain 30.6% of the observed variation in the outcome of interest. Foreign direct investment and Bangladeshi export growth need further investigation.
Table 5: ANOVA Table.

| Model   | Sum of Squares | df | Mean Square | F     | Sig.  
|---------|----------------|----|-------------|-------|------
| Regression | 2279.425     | 1  | 2279.425    | 40.860| .000 |
| Residual | 1004.140      | 18 | 55.786      |       |      |
| Total   | 3283.565      | 19 |             |       |      |

a. Dependent Variable: Export Performance of Bangladesh (Annual Export)
b. Predictors: (Constant), Annual FDI Inflow

Results from the aforementioned Table 5: ANOVA Table indicates that the annual FDI inflow provides the best account of Bangladesh's export performance. Less significant than the 0.05 cutoff is the P value of 0.000. As a result, the model generally accounts for the data. Bangladesh's export performance is therefore a trustworthy predictor of annual FDI inflow into Bangladesh.

Table 6: Coefficients Table.

<table>
<thead>
<tr>
<th>Model</th>
<th>Coefficients Unstandardized</th>
<th>Coefficients Standardized</th>
<th>Confidence Interval for B (95.0%)</th>
<th>t</th>
<th>Sig.</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td>t</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>6.759</td>
<td>3.066</td>
<td>2.204</td>
<td>.041</td>
<td>.316</td>
<td>13.201</td>
</tr>
<tr>
<td>Annual FDI Inflow</td>
<td>12.338</td>
<td>1.930</td>
<td>.833</td>
<td>6.392</td>
<td>.000</td>
<td>8.283</td>
<td>16.393</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Export Performance of Bangladesh (Annual Export)

From the above Table-6: Coefficients Table, the following regression function is extracted;

\[ Y_2 = 6.759 + 12.338X_2 \]

Where: \( Y = \) Export Performance of Bangladesh (Annual Export), \( \beta_0 = \) Constant, and \( X_2 = \) Annual FDI Inflow. If all other variables remain constant, the beta coefficient shows the change in Bangladesh's export performance that can be attributable to a unit change in the predictor variable. As a result, when all other variables remain constant, a unit change in Annual FDI Inflow results in a 12.338 difference in Bangladesh's export performance. The aforementioned scenario shows that the independent variable (Annual FDI Inflow) significantly improves Bangladesh's export performance (Annual Export).

7. Concluding Remarks

All governments seek FDI to boost economic growth. Indeed, the global market for such investment is competitive, and developing countries seek it to hasten their development. Governments are prioritizing FDI facilitation measures as liberal policy frameworks become more mainstream and lose some of their FDI-attracting power. Economics still matter. In the future, a country or region's unique combination of locational
advantages and produced assets will be more important to investors [36]. For the last two decades gradually Bangladesh comes out from the list of LDCs and became a rising star in various world economic indexes. Presently, Bangladesh is a role model to follow for its economic developments in all aspects in the South-Asian region, and FDI plays a vital role in keeping such a position. Bangladesh is doing much better to continue in economic growth, poverty reduction, and social development. This study was an attempt to reveal the facts and find how and at what level FDI affects boosting economic growth and export performance of Bangladesh. However, FDI is not the only factor of economic development for Bangladesh, but it has positive effects on its economic growth and export performance. Moreover, study results showed that if FDI is increased continuously then economic growth and export performance of Bangladesh will get pace. Therefore, the policy framework of the Bangladesh Government should be more flexible and lucrative to attract FDI which will help a lot to create more employment opportunities within the country and ensure sustainable economic development.

8. Limitations of the Study

It's important to acknowledge the various limitations of any study relevant to the effects of FDI on the economic growth and export performance of Bangladesh. Firstly, the findings of such a study are based on the historical data and may not capture the detail dynamic and evolving nature of FDI and its impacts respect to Bangladesh aspects. Additionally, the study may face numerous challenges in isolating the causal relationship between FDI and economic feedbacks due to the presence of other factors those are influencing economic growth and export performance of the country. Moreover, the study's generalizability may be restricted to the specific context of Bangladesh economy and may not be applicable to other countries with different economic structures and policies as well.

Acknowledgements

As corresponding author I would like to say thanks to the co-authors for their assistance in acquiring the data relevant to the research study and making the project more successful.

References


