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Contribution of Tax Induced Foreign Direct Investment for Sustainable Development in Bangladesh

Khadiza Begum

Abstract

Tax incentives play a crucial role in promoting and facilitating foreign direct investment (FDI), thereby contributing to a country's overall economic development. However, Bangladesh experienced a decline in FDI-based foreign income in the first two quarters of 2018, partially attributed to a lag in FDI from the USA. Given Bangladesh's historical challenges with deficit financing post-independence, increasing self-revenue income and leveraging tax-induced FDI are imperative for achieving sustainable development goals. To develop tax incentive-based hypotheses, four investment climate factors are considered: i) Corporate Tax Rate (CTR), ii) Tax Holiday (TaxH), and iii) Tax Concession (TaxC). This research adopts an analytical and descriptive approach, employing a mixed-method research methodology to analyze data sourced from both primary and secondary sources. Data collection methods include semi-structured interviews and documentary analysis, focusing on regulatory bodies like NBR, BIDA, and BOI for tax incentive analysis, and relevant organizations such as BB, World Bank, UNCTAD, BIDS, FIAS, BEZA, and BEPZA for FDI-related documents. The impact of tax incentives on FDI inflows in Bangladesh from 2001 to 2020 is analyzed using a simple regression model. The independent variables include corporate tax rate, tax holiday, and tax concession, while controlled variables such as gross domestic product (GDP) and corruption are also considered, as they may influence FDI inflows. Statistical analysis reveals a negative influence of corporate tax rate on FDI inflows, while the tax holiday variable exhibits a positive and statistically significant relationship with FDI inflows. Furthermore, alongside the contribution of FDI, this study also examines sustainable development trends from 2016 to 2020, providing numerical insights into its attainment. Overall, this research sheds light on the importance of tax incentives in attracting FDI and its implications for sustainable development in Bangladesh.

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About Author (s)

Khadiza Begum, PhD fellow, Institute of Bangladesh Studies (IBS), University of Rajshahi, Rajshahi, Bangladesh. & Assistant Professor of Accounting, Department of Accounting, Rajshahi College, Rajshahi. Bangladesh.

1.1 Introduction

The effects of tax incentives on several facets of corporate behaviour and economic consequences have been well studied in the past. For example, Hosono, Hotei, and Miyakawa (2023) looked into the causal effects of a tax incentive on capital investment by SMEs in Japan and discovered that, although the tax incentive did not raise capital investment rates overall for SMEs that qualified, it did increase investment and productivity for the businesses that took advantage of it. In a similar vein, Deyganto (2022) investigated how tax incentive policies affected the long-term viability of micro, small, and medium-sized businesses (MSMEs) in Ethiopia amid the COVID-19 pandemic, emphasizing the advantages of tax incentives like tax holidays, allowances, and reductions. According to Colombo and da Cruz's (2023) evaluation, there are favorable benefits of innovation tax incentives in Brazil on expenditures for research and development (R&D) as well as the number of research staff members in recipient enterprises. Additionally, Knoll et al. (2021) looked at the cross-border effects of R&D tax incentives and discovered that although these incentives enhanced R&D spending within particular nations, they also caused multinational corporations to reallocate their R&D activity across borders. Together, these studies offer insightful information about the efficacy and ramifications of tax incentive programs for companies operating in various industries and contexts. A summary of the Malaysian Islamic banking market was also given in the Febrian and Tamma (2019) report, which focused on the contribution of tax incentives on industry expansion and competitiveness.

The Government of Bangladesh (GoB) has set forth ambitious development goals, notably Vision 2021 and Vision 2041, aiming to elevate the country to upper-middle-income and developed status, respectively (Naim & Begum, 2013). Achieving these goals necessitates a substantial influx of investment, considering Bangladesh's existing saving-investment gap, which can be bridged through both internal and external sources (Mamun & Rahman, 2013). External sources, including foreign direct investment (FDI) and foreign aids, play a pivotal role in meeting Bangladesh's investment needs. FDI, in particular, is recognized as a crucial catalyst for the economic progress of emerging economies (Mamun & Rahman, 2013).

Bangladeshi officials carefully examine tax incentives when preparing the budget in order to draw in foreign investors, given the importance of FDI. FDI propels emerging nations' economies and makes a substantial contribution to globalization. Relating to the export-driven growth model embraced by prosperous economies such as the East Asian tigers and South-East Asian states, major international organizations like the World Bank and the IMF promote economic opening up to foreign investment. They think that by taking this strategy, production efficiency and competitiveness are improved. But the last three decades have also brought significant environmental and societal problems, such as extreme poverty, climate change, and global warming, along with economic progress. The United Nations Sustainable Development Goals (SDGs) (UNGA, 2015) demonstrate how serious these issues are worldwide and highlight the need for inclusive and environmentally sustainable development.

Despite global trends showing an increase in FDI inflows over the years, Bangladesh experienced a decline of around 11.0% in FDI inflows in 2020, dropping to US$2.56 billion from $2.87 billion in 2019. This decline was exacerbated by the COVID-19 crisis, which caused a dramatic decrease in global FDI flows by 35% in 2020 (Financial Express, June 21, 2021). To address these challenges and leverage FDI for sustainable development, Bangladesh Economic Zones Authority (BEPZA) has been actively implementing Vision 2021 & 2041 through the operation of eight Export Processing Zones (EPZs) and Economic Zones (EZ). These zones aim to facilitate stakeholders and create an eco-friendly investment environment conducive to national export and socio-economic development. Thus, this study endeavors to examine the "Contribution of Tax-Induced Foreign Direct Investment to Sustainable Development in Bangladesh."

1.2 Research Objectives

The main objective is to understand the role of tax-induced FDI and its contribution to sustainable development, particularly through global partnerships. To attain the principal objective there are some specific objectives are: firstly, to analyze the tax incentives influence on Foreign Direct Investment inflows in Bangladesh; and secondly, to examine the influence of tax incentives on increasing FDI to attain sustainable development.

2. Literature review

The subject of foreign direct investment, or FDI, has attracted a lot of interest in the world of international business. Many studies have looked at many facets of foreign direct investment (FDI), such as how it affects host countries, how much FDI comes from developing countries, and what factors influence where FDI goes (Paul & Singh, 2017). This study primarily explores the factors that influence the placement of foreign direct investment (FDI) in Southeast Asian nations, with an emphasis on the influence of tax policy on these factors. This chapter reviews the body of research on FDI determinants in order to provide insights into the variables affecting FDI. The theoretical foundations of foreign direct investment (FDI) are first examined, and then a summary of the literature on FDI determinants is provided. The chapter then delves into how tax policy affects foreign direct investment (FDI), including talks on corporate income tax (CIT), tax planning, and tax incentives. Lastly, a review of the previous research is given, emphasizing the gaps in the literature that this study aims to address.

In the context of Bangladesh, there is limited research on tax-induced FDI, much of which relies on secondary sources and lacks a recognized research methodology. These studies primarily highlight the challenges and deficiencies of Bangladesh's income tax systems and tax incentives, while also proposing reforms. While extensive research exists on tax incentives and effective tax rates (ETR) in developed and least developed countries such as the US, EU, South Africa, Ghana, and Sub-Saharan countries, there is a notable dearth of studies on incentives related to FDI for sustainable development in Bangladesh. In one such research, Ahmed (2016) suggests a comprehensive strategy for Bangladesh that is predicated on the compliance model of the Australian Taxation Office (ATO). The paper looks at several theories of tax compliance, such as the ATO enforcement pyramid, and makes the case that taxpayers and the state have a fiduciary relationship. Additionally, it assesses the legal tools used by Bangladesh's income tax administration, including third-party tax information reporting systems and tax amnesty. However, the study suggests that tax amnesty has not been effective in preventing tax evasion and that existing laws on third-party information reporting are inadequate. Drawing on international examples, the study recommends best practices for Bangladesh and proposes policy suggestions for long-term improvement in tax compliance. Moreover, while research on tax-induced FDI in Bangladesh is limited, existing studies provide valuable insights into the challenges and potential reforms needed to enhance tax compliance and foster sustainable development through FDI.

In order to investigate several aspects of the connection between foreign direct investment (FDI) and economic growth in emerging and transitional economies, Mamatkulov and Mamatkulov (2016) carried out a study. Their study attempted to investigate FDI's geographical factors and effects on domestic investment and economic growth empirically. From 1997 to 2011, a sample of 54 developing and transitioning economies in Eastern Europe, South America, Asia, and Sub-Saharan Africa were included in the study. The two-step system GMM model's results showed that FDI stock has a detrimental long-term impact on economic growth (Mamatkulov & Mamatkulov, 2016). Using Tanzania as a case study, Kiria (2017) conducted research to comprehend the effects and variables impacting the results of Export Processing Zones (EPZs) in a latecomer setting. The goal of the study was to understand why tax incentives are maintained by governments in developing countries. Utilising a variety of research techniques, including direct observation, semi-structured interviews, questionnaires, and document analysis, the analysis was carried out within the context of neoliberal theoretical thought (Kiria, 2017). Using the 'State-Investor-Population (S-I-P) Triangle' lens, Yang (2019) critically investigated several contractual methods to balance the protection of foreign direct investment (FDI) with sustainable development values in the energy industry. The study identified fragmented and unbalanced legal frameworks for regulating international energy investment by combining socio-legal approaches and doctrinal analysis. It also suggested classifying existing contractual mechanisms as "soft contracts," "enforcement contracts," and "innovative contracts." The study used China's outbound foreign direct investment in the energy sector as a comprehensive case study (Yang, 2019). The historical trend of U.S. business investment incentives from 1953 to 1986 was examined by Auerbach and Hines (1988). They noted that investors were highly motivated to invest in 1986 because of the anticipated reductions in investment incentives, as well as their anticipation of changes in the tax law. R. and Hines (1999) looked at how foreign taxes affected foreign tax evasion and foreign direct investment patterns. According to their research, taxes have a major impact on corporate borrowing, FDI location, dividend and royalty payments, transfer pricing, and R&D performance. This emphasises the significance of taxpayers' responses to incentives for the design of tax policies (R. & Jr., 1999). Egger et al. (2006) used a general equilibrium model of trade and multinational corporations to investigate the impact of tax treaties on bilateral outward FDI stocks. They discovered a considerable detrimental effect of recently enacted tax treaties on external FDI stocks after analysing bilateral OECD outward FDI data from 1985 to 2000 (Egger et al., 2006). From 2000 to 2015, Akonnor (2018) examined how foreign direct investment (FDI) affected economic growth in East and Central Africa. The study used panel data econometrics and pooled Ordinary Least Square (OLS) regression using data from World Bank Development Indicators and World Governing Indicators. The results showed that foreign direct investment (FDI) had a favourable effect on economic growth in East Africa, indicating the necessity of policies to draw FDI to Central Africa (Akonnor, 2018). From 1980 to 2016, Symoom (2018) examined how fiscal policy affected economic growth in Bangladesh, India, Pakistan, and Sri Lanka. The study discovered that tax income and government spending had no discernible effects on real GDP growth in South Asian nations using the Autoregressive Distributed Lag (ARDL) and Error Correction Model (ECM) on pooled cross-section time-series data and panel data (Symoom, 2018). Edmiston et al. (2003) investigated the connection between the experiences of transition nations in drawing foreign direct investment and the changes they made to their tax systems. According to their analysis, tax regulations' ambiguity and complexity discouraged inward foreign direct investment by raising transaction costs, the burden of compliance, and the uncertainty of tax liabilities (Edmiston et al., 2003). Gordon and Li (2009) looked into tax systems in emerging nations and how policies are predicted to change if businesses use cash to avoid paying taxes. They made the argument that policy forecasts may be impacted by tax evasion and offered a solution (Gordon & Li, 2009). The competitiveness of South Africa's tax system and its possible influence on foreign direct investment (FDI) were assessed by Kransdorff (2010). The study evaluated whether South Africa's tax system contributed to the absence of foreign direct investment (FDI) using the GEAR approach (Kransdorff, 2010). In an updated summary of tax incentives for corporate investment, Klemm (2010) talked about how tax competitiveness motivates tax revisions. The study included justifications for and against tax incentives as well as a matrix of standards to assess their applicability in light of a nation's unique circumstances (Klemm, 2010). Cover (2010) looked into how the corporate income tax rate affected foreign direct investment (FDI) in high-income OECD nations between 1998 and 2006. The analysis identified other key variables, such as economic freedom, GDP, and geographic location, and found that the corporate income tax rate did not significantly effect FDI inflows in OECD members during the defined time (Cover, 2010).

In summary, the reviewed literature provides valuable insights into various aspects of foreign direct investment (FDI) and its relationship with economic growth, tax policies, and sustainable development. Studies have explored the determinants of FDI location, the impact of tax incentives on FDI inflows, and the effectiveness of fiscal policies in attracting investment. Additionally, research has examined the role of contractual mechanisms in reconciling FDI protection with sustainable development goals, highlighting the importance of addressing legal frameworks and contractual arrangements. By synthesizing findings from these studies, the literature underscores the complexity of FDI dynamics and the need for nuanced policy approaches to foster sustainable economic development through FDI.

3. Research Methodology

3.1 Research Method

This research will be analytical and descriptive in nature. A mixed method research approach will be used to analyze and present the study issues. Both quantitative and qualitative data will be used in this study.

3.2 Sources of Data

Data will be collected from both primary and secondary sources.

i) Primary Data

Primary data will be collected through semi-structured interviews. For this face-to -face interviews will be conducted with the organization officials who are associated with the investment, FDI such as BIDA officials, GED officials of the Planning Commission and EPZs and SEZs. EPZ and SEZ operating authorities are BEZA and BEPZA officials.

ii) Secondary Data

In the collection of secondary data, various organizations are playing a crucial role, including the National Board of Revenue (NBR), Bangladesh Bank, General Economic Department within the Planning Commission (GED), Bangladesh Investment Development Authority (BIDA), and the United Nations Conference on Trade and Development (UNCTAD). Additionally, resources such as the World Bank Development Indicators (WDI) and the World Competitiveness Index Report are being utilized to gather both published and unpublished documents.

3.3 Data Collection Tools

Semi-structured Interview and Documentary Analysis

For tax incentive, announcement, and record analysis regulatory bodies are NBR, BIDA BOI.

FDI related documents will be collected from respective organizations such as BB, World Bank, UNCTAD, BIDS, FIAS, BEZA and BEPZA. Sustainable development related information from Planning Commission GED Department, World Competitiveness Index Report, Ministry of Finance and Economic review of respective years.

3.4 Variables of the Study and Sources of Data

The study uses secondary data mostly. The United Nations Conference on Trade and Development (UNCTAD), the World Bank World Development Indicators (WDI), the World Competitiveness Index Report, and the World Resources Institute were among the several national ratings from which the data, as displayed in Table 1, were gathered. The years 2001 through 2019 are included in these sources. The World Bank's World Development Indicators (WDI) dataset provided the data on foreign direct investment (FDI), which was the dependent variable. The study takes into account the corporate tax rate (CTR), tax holiday (TaxH), and tax concession (TaxC) as three independent variables pertaining to tax incentives. Furthermore, the regression analysis accounts for seven economic variables at the national level: GDP, trade openness, exchange rate, adult illiteracy rate, political stability and lack of violence, corruption, and infrastructure. The Sustainable Development Goals (SDGs) targets and indicators will be explained using primary data, along with proposals for policy reform.

Table 1. Variable description and data sources

Variable	Type	Sources of Data	Description
Tax incentives	Main Independent Variable	BEPZA,NBR,BOI,BB	Tax Holiday (TaxH), Corporate Tax Rate (CTR) and Tax Concession (TaxC)
Foreign Aid	Control Independent Variable	World Development Indicators (World Bank)	Net Official Development Assistance (ODA) received per capita in current U.S. dollars
FDI	Dependent Variable	World Investment Reports(UNCTAD), World Development Indicators (World Bank), Statistics Department	Net FDI inflows in U.S.dollars (as a percentage of Nominal GDP)
External Debt	Control Independent Variable	World Development Indicators (World Bank)	External debt stocks (percentage of GNI)
Gross Domestic Product(GDP) & Corruption,	Control Variable	World Development Indicators(2001-2020)	GDP per capita measured as a constant 2010 USD

3.5 Hypotheses Development

Based on the specific objectives for a better understanding of the relationship of tax incentives, FDI, and sustainable development, the null hypotheses of the study are-
For developing tax incentive-based hypotheses there are four investment climate factors are used as tax incentives such as i) Corporate tax rate (CRT), ii) The corporate income tax holiday for (TaxH) and iii) Tax Concession (TaxC)

For Tax Incentives and FDI:

i) H_0: Corporate tax rate (CRT) has no influence on FDI.

This hypothesis is formulated based on Andersen et al. (2017), which discusses the potential impact of global minimum tax rules on multinational enterprises (MNEs) and the changes in corporate tax rates. It suggests that changes in corporate tax rates may influence the decisions of MNEs regarding FDI.

ii) H_0: Regular tax holidays (TaxH) have no influence on FDI inflows.

This hypothesis is grounded in the study by Patrick Ofori (2019), which examines the use of tax incentives to attract FDI in sub-Saharan Africa. It suggests that tax incentives, such as tax holidays, are a prominent feature of investment codes in the region.

iii) H_0: Tax concessions (TaxC) have no significant impact on FDI.

This hypothesis is derived from the discussion on tax incentives in Mbengue (2018), which highlights the importance of investment facilitation measures, including tax incentives, for sustainable development in Africa.

For Sustainable Development:

iv) H_0: GDP growth rate does not Granger Cause FDI.

This hypothesis is based on the study by Lozano Rodríguez (2021), which examines the relationship between tax incentives, FDI, and sustainable development in Pacific Alliance countries. It suggests that tax incentives are designed to promote economic growth and development.

v) H_0: FDI does not Granger Cause GDP growth rate.

This hypothesis is formulated based on Duc Hoang Tho's (2019) analysis of the socio-economic efficiency of FDI towards sustainable development. It suggests that FDI contributes to various aspects of economic development, including GDP growth.

For Official Development Assistance (ODA) and Gross National Income (GNI) Ratio:

vi) H_0: ODA has no impact on GDP growth rate.

This hypothesis is formulated considering the discussion on investment facilitation and sustainable development in Mbengue (2018), which emphasizes the importance of international cooperation and support, including ODA, for facilitating sustainable FDI and achieving the SDGs in Africa.

These null hypotheses are developed based on the insights provided by the prior studies, which highlight the role of tax incentives, FDI, and international cooperation in promoting sustainable development.

3.6 Variables Description and Measurement

We used data from last twenty (20) years data from 2001 to 2020 for achieving our research goal and answer our research inquiries. Time series data of FDI inflows and some selected indicators that affect FDI of Bangladesh from 2001 -2020 for the analysis.

Table 2. Variable Description

Variable	Type	Description
Tax incentives	Main Independent Variable	Tax Holiday (TaxH), Corporate Tax Rate (CTR) and Tax Concession (TaxC)
FDI	Dependent Variable	Net FDI inflows in U.S.dollars (as a percentage of Nominal GDP)
Foreign Aid, External Debt and Gross Domestic Product(GDP)(GDP per capita measured as a constant 2010 USD) & Corruption	Control Independent Variable	Net Official Development Assistance (ODA) received per capita in current U.S. dollars External debt stocks (percentage of GNI)

4. 1 Data Analysis and Discussions

According to the mixed method, both types of data are analyzed separately. Quantitative data is being analyzed through a deductive approach to test the theory and hypothesis. FDI and GDP from 2001 to 2020 consist of 20 annual observations that provide the quantitative data for the study, which are analyzed by regression and correlation matrix.

We do the following multiple and simple linear regression by using this model separately for FDI and GDP:

$\gamma_{it} = \beta_0 + \beta_1 X_{i,t} + \varepsilon it$

Here X= Independent variables=TaxH,CTR,TaxC,GDP and corruption

$FDIit= \beta_0 + \beta 1(CTR)it + \beta_2(TaxH)it + \beta_3(TaxC)_{it} + \beta_4(\text{Control Var})_{it} + \varepsilon it$ ....(1)

Subscripts i,t indicate the firm and the period.

Two methods are used in the analysis of the time-series data: fixed effects and random effects. The fixed effect approach makes the assumption that, within each entity, the connection between the independent and dependent variables stays constant. According to this assessment, each unique entity's time-variant attributes are distinct and shouldn't be associated with those of other entities. Consequently, the fixed effect might not be acceptable if the error terms show correlation because the conclusions might not hold true. This study's descriptive analysis is shown in Table 3, which also includes information on each variable's mean, number of observations, lowest and maximum values, and standard deviation. With 20 observations for each variable, the dataset for Bangladesh from 2001 to 2020 is unbalanced. During the survey period, the average value for foreign direct investment was 0.915. The sampled countries' average corporate tax rate was 0.284. The tax concession had a minimum value of 1 and a maximum value of 2, with a mean value of 1.6. For the study countries, the average tax holiday was 1.55, with a maximum observation of 2 and a minimum of 1.

Table 3. Descriptive Statistics (2001-2020)

	N	Minimum	Maximum	Mean	Std. Deviation
FDI net inflows (% of GDP)	20	.096	1.735	0.91539	0.429082
Tax holiday	20	1	2	1.55	0.510
CTR	20	0.250	0.350	0.28375	0.029553
Tax concession	20	1.00	2.00	1.6000	0.50262
Gross Domestic Product(GDP)	20	413.080	1968.790	936.26700	485.323063
Corruption	20	0.04000	0.28000	0.2155000	0.06452050
Valid N (list wise)	20				

In Table 4, with dependent and independent variables, multiple regression analysis shows that the variables are somewhat related to each other. From this result, we cannot get our desired output for tax-induced FDI and sustainable development. In this situation, a single regression analysis may overcome the inconsistency.

Table 4. Correlation matrix results

	FDI net inflows (% of GDP)	Tax holiday	CTR	Tax concession	Gross Domestic Product (GDP)	Corruption	FDI net inflows (% of GDP)
FDI net inflows (% of GDP)	Pearson Correlation	1	0.241	-0.473*	0.457*	0.235	0.641**
Tax holiday	Pearson Correlation	0.241	1	-0.598**	0.492*	0.641**	0.575**
CTR	Pearson Correlation	-.473*	-.598**	1	-.815**	-.839**	-.896**
Tax concession	Pearson Correlation	0.457*	0.492*	-0.815**	1	0.763**	0.834**
Gross Domestic Product(GDP)	Pearson Correlation	0.235	0.641**	-0.839**	0.763**	1	0.714**
Corruption	Pearson Correlation	0.641**	0.575**	-0.896**	0.834**	0.714**	1

**. Significant (Correlation) at the 0.01 level (2-tailed)
*. Significant (Correlation) at the 0.05 level (2-tailed)

The dependent and independent variables have a significant linear relationship, as indicated by the 'F' and 'R Square' values presented in Table 5. According to the regression model's predictions, the amount of FDI net inflow (% of GDP) may be impacted by any changes, whether favorable or unfavorable, that affect the independent or control variables in the economy. Table 6 examines a single linear relationship between the control, independent, and dependent variables. Table 6 presents our findings with respect to our research hypotheses. The association between the tax vacation variable's coefficient and Bangladesh's inflows of foreign direct investment is positive but not statistically significant. The second null hypothesis is rejected since frequent tax vacations are not statistically correlated with FDI inflows, despite the fact that the tax holiday tends to rise with an increase in FDI.

Moreover, there is a noteworthy negative correlation between the corporate tax rate and foreign direct investment inflow. This shows that the higher corporation tax rates in Bangladesh's strategic industries have a detrimental impact on the decision-making of foreign investors, which refutes the first null hypothesis in our formulation of hypotheses: that Bangladesh's corporate tax rates have a favorable impact on FDI inflows. However, the tax concession coefficient shows a statistically significant positive link with FDI inflows, indicating that nations that give extensive tax concessions would be able to draw in the projected amount of FDI. This result disproves our third research hypothesis, which held that tax breaks granted by a nation had no effect on FDI inflow. Finally, there is a positive and statistically significant correlation between our control variables—corruption coefficients, for example—and FDI inflows into Bangladesh. This suggests that nations with higher values on the corruption index make greater efforts to combat corruption, which in turn draws in more investment and confidence in corporate decisions. The real gross domestic product (constant 2010 USD) and foreign investors show a positive but statistically insignificant link, suggesting that greater GDP levels in Bangladesh encourage overseas companies to invest. In Bangladesh, business tax rates, tax holidays, and tax concessions continue to have a significant impact on foreign direct investment inflows. In a basic linear regression, additional variables are automatically controlled when one independent variable is linked to the dependent variable.

Table 5. Regression model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics	
					R Square Change	F Change
1	0.717[a]	0.513	0.340	0.348679	0.513	2.955

Table 6. Simple Linear Regression results

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	0.602	0.313		1.923	0.070	-0.056	1.260
	Tax holiday	0.202	0.192	0.241	1.051	0.307	-0.202	0.606
	CTR	-6.865	3.016	-0.473	-2.277	0.035	-13.200	-0.530
	Tax concession	0.390	0.179	0.457	2.179	0.043	0.014	0.766
	Gross Domestic Product (GDP)	0.000	0.000	0.235	1.026	0.318	0.000	0.001
	Corruption	4.261	1.203	0.641	3.541	0.002	1.733	6.789

a. Dependent Variable: FDI net inflows (% of GDP)

a. Predictors: (Constant), Corruption, Tax holiday, Gross Domestic Product (GDP), Tax concession, CTR

Table 7. ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.796	5	0.359	2.955	0.050[b]
	Residual	1.702	14	0.122		
	Total	3.498	19			

4.2.1 Sustainable Development (SD)

The concept of sustainable development has undergone multiple phases of development, with the early emphasis mostly on the environmental consequences of economic expansion. Later, the idea grew to include social issues in addition to economic and environmental issues. It is now well acknowledged that intergenerational justice is at the center of sustainable development, which consists of three interrelated dimensions: economic, social, and environmental. Summits and conferences have often evaluated how well earlier action plans have been implemented. Globalization brings additional hurdles to sustainable development efforts, even as it presents opportunity, as recognized by the World Summit on Sustainable Development (WSSD). The role of the business sector in promoting just societies and communities was emphasized by the WSSD. In a similar vein, the Earth Summit stressed how important it is to advance ecologically sustainable economic growth and lower worldwide poverty rates. The 2012 Earth Summit resulted in "The Future We Want," a non-binding declaration that laid the groundwork for the creation of the Sustainable Development Goals (SDGs) by essentially restating earlier action plans. In order to achieve an economically, socially, and environmentally sustainable future for the earth and all current and future generations, this declaration recognizes the tripartite nature of sustainable development. The summit promoted a comprehensive strategy to advance sustainability and emphasized the necessity of integrating the three facets of sustainable development.

4.2.2 Sustainable Development Goals (SDGs)

Developing nations have particularly severe environmental and socioeconomic issues in the context of sustainable development, which makes the need for inclusive and ecologically friendly development plans urgent. The United Nations Sustainable Development Goals (SDGs), which were announced in 2015, highlight this urgency. This study aims to demonstrate the ways in which tax-induced foreign direct investment (FDI) might support sustainable development, namely through international collaborations as delineated in SDG 17. One of Agenda 2030's main goals is SDG 17, which is to "strengthen the means of implementation and revitalise the global partnership for sustainable development." Voluntary national reviews (VNRs) submitted to the High-Level Political Forum on Sustainable Development (HLPF) have constantly emphasised it. SDG 17 is a cross-cutting target that focuses on partnership development and resource allocation in three critical domains: the economy, society, and ecology. It includes a wide range of goals and metrics related to trade, technology, finance, creating capacity, and systemic problems. This study attempts to pinpoint certain actions required for accomplishing SDG 17's several targets and promoting sustainable development globally through a thorough analysis of the goal.

4.2.3 Bangladesh's Priority Targets under SDG 17 and Performance in the Post-2015 Period

A sample survey was carried out as part of the current study in order to determine the priority targets under Goal 17 for Bangladesh. Five of the 19 targets—which focused on money (17.1 to 17.3), technology (17.6), and systemic concerns (17.17)—were found to be the most crucial for Bangladesh (CPD, 2019). Notably, the highest priority priorities for accomplishing Goal 17 were the mobilisation of domestic resources and the diversification of finance sources, including FDI inflows, remittances, and debt management. Bangladesh's changing demands are probably reflected in this prioritisation, particularly in light of the country's most recent achievements in social and economic development. Despite some lacklustre performance in reaching these priorities during the post-2015 period (statistics for 2016 and 2017), Bangladesh's performance has improved since then. For example, the entire government revenue for the 2019–20 fiscal year was BDT 3480.69 billion, or 12.41 percent of GDP. In recent years, this percentage has stayed largely steady. Compared to its participation in the domestic budget for 2018–19, tax revenue, which makes up 89.94 percent of overall government revenue, somewhat decreased (Planning Commission Publication, 2021).

Table 8. 17.1: Total government revenue and proportion of domestic budget

Indicators	2015	2016	2017	2018	2019	2020
Total government revenue as a proportion of GDP, by source	10.78	10.26	10.16	11.60	12.45	12.41
Proportion of domestic budget funded by domestic taxes	62.00	61.75	61.77	64.16	65.44	62.42

Source: Bangladesh Economic Review 2020, Ministry of Finance, FD

Target 17.2 requires developed nations to meet their obligations for official development assistance, which include reaching the goal of giving least developed nations 0.15 to 0.20 percent of official development assistance (ODA)/GNI and developing nations 0.7 percent of GNI. It is also recommended that ODA suppliers set a goal to support least developed nations with at least 0.20 percent of ODA/GNI. Net official development assistance, both generally and specifically to least developed countries, is measured by indicator 17.2.1 as a percentage of the gross national income of donor nations that are members of the Development Assistance Committee (DAC) of the Organisation for Economic Cooperation and Development (OECD).

Table 9. ODA & GNI

Year	ODA (per capita us $)	GNI(per capita us $)	ODA/GNI
2015	16.594	207.743	0.079878
2016	16.033	234.168	0.068468
2017	23.683	260.441	0.090934
2018	18.867	286.536	0.065845
2019	27.493	316.899	0.086756
2020	25.875	338.933	0.076343

Sources of data: World development indicators database (2001-2020)

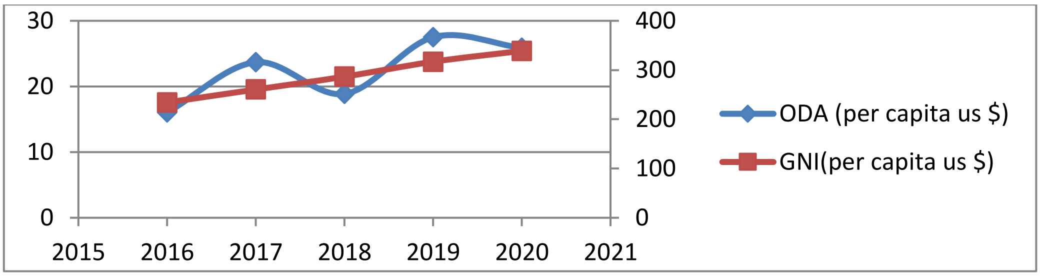

Figure: ODA and GNI

After the computation it is said that the sixth null hypothesis is rejected, that means ODA has positive influence on GDP.

Table 10. 17.2: Overseas development assistance and annual budget

Year	2015	2016	2017	2018	2019	2020
Budget (billion USD)	33.81	33.80	42.58	51.00	55.31	59.16
ODA (billion USD)	3.01	3.53	3.68	6.40	6.21	7.12
ODA as % of budget	8.90	9.60	8.64	12.55	11.23	12.04

Source: ERD & Bangladesh Economic Review 2020, Ministry of Finance

Indicator 17.3.1 measures foreign direct investments (FDI), official development assistance (ODA), and South-South Cooperation (SSC) as a proportion of the total domestic budget. In Bangladesh, external sources, comprising FDI and ODA, play a crucial role in financing approximately 15 percent of the domestic budget. It is noteworthy that in recent years, the expansion of the national budget has lagged behind the growth in ODA to Bangladesh. Additionally, the disbursement of external aid is escalating annually, indicating a corresponding increase in foreign aid inflows to Bangladesh. This trend suggests the likelihood of greater investments in infrastructure and other sectors aimed at development.

Table 11. 17.3: FDI as a proportion of annual budget

Year	2015	2016	2017	2018	2019	2020
FDI(billion USD)	1.83	2.00	2.45	1.78	2.63	1.80
FDI as % of budget	5.41	5.92	5.75	3.49	4.76	3.04

Source: ERD & State of the Macro economy, GED

On the other hand, the performance in some indicators is on track, such as filed broadband subscription under Target 17.6, and remittance-export ratio under Target 17.3.

4.2.4 Private sector in SDG 17

In contrast to the Millennium Development Goal (MDG) era, the private sector has become a major player in the implementation of the Sustainable Development Goals (SDGs). Using data from the Sustainable Development Partnership Platform, an initiative headed by the United Nations (UN), the Centre for Policy Dialogue (CPD) carried out an online analysis of private sector engagement worldwide (CPD, 2019). Globally, the private sector is involved in a range of initiatives, such as information and communication technology (ICT) capacity building, media services, livelihood development, and sharing of knowledge on gender equality, climate change, and community development. Interestingly, the private sector frequently establishes independent organisations, like foundations, through which corporate social responsibility (CSR) funds are channelled to support colleges, research centres, banks, and schools in carrying out various activities, rather than directly engaging as corporate entities. These interactions can take many different shapes; they can involve foundations working with universities, foundations working with CSOs, or foundations working with UN agencies, among other organisations. However, in Bangladesh, the private sector primarily uses a "business as usual" strategy for tackling issues linked to SDG 17. Although certain activities are identifiable, only a small number are expressly aimed at fulfilling the objectives of Goal 17. It is unclear how much of the aims of Goal 17 are being intentionally addressed by these activities.

4.2.5 Challenges and Way Forward

The study identified several issues and concerns, primarily falling into three categories: framework-related, data-related, and performance-related. The following areas require careful consideration:

Bangladesh could not come out from the ‘business as usual’ trend in implementing Goal 17

Bangladesh is making progress towards achieving the Sustainable Development Goals (SDGs), particularly in advancing the top-priority targets of Goal 17. However, in the realm of business, the country continues to adopt a 'business as usual' approach in implementing the related targets under the five areas of Goal 17: finance, technology, trade, capacity building, and systemic issues. Both the private sector and civil society organizations (CSOs) have significant roles to play in addressing key issues related to domestic resource mobilization, foreign direct investment (FDI), and technology. Despite these advancements, several key challenges persist. There is a need to further enhance resource mobilization efforts, particularly in enforcing value-added tax (VAT) collection, which poses a significant challenge due to limitations in human and technical capacity within the relevant departments. Capacity building initiatives require substantial financial resources, and illicit financial flows present a major obstacle to domestic resource mobilization efforts. Moreover, while official development assistance (ODA) remains a major external source of financing for budgetary expenses, its contribution relative to the size of the national budget is diminishing. Additionally, Bangladesh's status as a developing country may pose challenges in accessing grants and low-interest loans in the future. Diversifying the sources of remittances is also essential to enhance economic stability and resilience.

Conclusion

The significance of attracting substantial amounts of Foreign Direct Investment (FDI) cannot be overstated for Bangladesh's economic development. Strengthening investment fundamentals is recognized as the long-term solution to improving FDI performance. Various government authorities, including BEPZA, BOI, BIDA, BB, and NBR, have been actively providing fiscal and non-fiscal incentives to encourage FDI inflows. In our analysis covering the period from 2001 to 2020, we examined the impact of tax incentives on FDI inflows. Our model incorporated variables such as corporate tax rate, tax holiday, and tax concession, alongside controlled variables like gross domestic product (GDP) and corruption, which could also influence FDI inflows. The statistical analysis revealed that the corporate tax rate had a negative effect on FDI inflows, while the tax holiday variable exhibited a positive and statistically significant relationship with FDI inflows. Additionally, tax concessions were found to have a positive and significant impact on investment inflows. Moreover, control variables such as GDP and corruption showed a positive relationship with investment decisions. Achieving the Sustainable Development Goals (SDGs) in Bangladesh will necessitate significant financial resources, including investments in social welfare, infrastructure, and environmental sustainability. With a relatively low tax-to-GDP ratio, Bangladesh has the potential to bolster domestic resources by expanding the tax base, implementing tax reforms, strengthening tax administration, and adopting innovative tax regimes. Collaboration between the government and Civil Society Organizations (CSOs) across various dimensions will be essential for SDG implementation. This collaboration should focus on enhancing domestic resource mobilization through efficient revenue collection, meeting ODA commitments to achieve targeted Gross National Income (GNI), mobilizing additional financial resources, and fostering effective partnerships between the public sector, private sector, and civil society to promote sustainable development.

Applications

The findings of this study hold several practical applications for policymakers, government authorities, investors, and stakeholders involved in Bangladesh's economic development. Firstly, policymakers can utilize the insights gained from the analysis of tax incentives and their impact on FDI inflows to formulate more effective investment promotion policies. By understanding which incentives are more conducive to attracting FDI, policymakers can tailor their strategies to optimize investment inflows while ensuring sustainable economic growth. Government authorities, including the National Board of Revenue (NBR), Bangladesh Bank (BB), Board of Investment (BOI), and Bangladesh Economic Zones Authority (BEZA), can use the findings to refine existing incentive schemes and introduce new ones that are aligned with the objectives of attracting FDI. By offering targeted incentives such as tax holidays or concessions based on the findings of this study, these authorities can create a more attractive investment environment for foreign investors. Investors, both domestic and foreign, can benefit from the insights provided by this study by making informed decisions about investment opportunities in Bangladesh. Understanding the relationship between tax incentives and FDI inflows can help investors assess the potential returns and risks associated with investing in specific sectors or regions within Bangladesh. Additionally, stakeholders involved in sustainable development initiatives can leverage the findings of this study to advocate for policies that promote both economic growth and environmental sustainability. By highlighting the positive impact of tax incentives on FDI inflows and ultimately on sustainable development goals, stakeholders can build a compelling case for aligning investment promotion policies with broader development objectives. Overall, the applications of this study extend beyond academic research to inform policy formulation, investment decisions, and sustainable development initiatives in Bangladesh. By integrating the findings into decision-making processes, stakeholders can work towards fostering a more prosperous and sustainable future for the country.

Limitations and Future Research Directions

While this study provides valuable insights into the impact of tax incentives on foreign direct investment (FDI) in Bangladesh, several limitations should be acknowledged. Firstly, the analysis relies on secondary data sources, which may be subject to limitations such as data accuracy, reliability, and completeness. Despite efforts to mitigate these issues through careful selection and validation of sources, the inherent constraints of secondary data cannot be entirely eliminated. Secondly, the study primarily focuses on the relationship between tax incentives and FDI inflows, overlooking other potential determinants of FDI such as political stability, infrastructure, and market size. Future research could explore the interaction between tax incentives and these factors to provide a more comprehensive understanding of FDI dynamics in Bangladesh. Thirdly, the study period from 2001 to 2020 may not capture recent developments or changes in investment policies and economic conditions that could influence FDI inflows. A more up-to-date analysis incorporating recent data could provide a more accurate assessment of the current situation and future trends.

Building on the findings of this study, several avenues for future research can be identified. Firstly, longitudinal studies tracking FDI inflows over time could provide insights into the long-term impact of tax incentives on investment behavior and economic development in Bangladesh. By examining trends and patterns over an extended period, researchers can identify evolving dynamics and potential policy implications. Secondly, qualitative research methods such as interviews and case studies could complement quantitative analysis by providing deeper insights into the motivations and decision-making processes of foreign investors. Understanding investors' perspectives firsthand could help identify barriers to investment and opportunities for improvement in investment promotion strategies. Thirdly, comparative studies analyzing the effectiveness of tax incentives in attracting FDI across different countries or regions could offer insights into best practices and policy recommendations. Benchmarking Bangladesh's performance against that of other countries can help policymakers identify areas for improvement and learn from successful strategies implemented elsewhere. Overall, addressing these limitations and exploring these future research directions could contribute to a more nuanced understanding of the relationship between tax incentives, FDI inflows, and economic development in Bangladesh, informing more effective policy decisions and promoting sustainable growth.

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