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ORIGINAL ARTICLE

The impact of foreign direct investment inflows on the tax revenues in bangladesh

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Abstract

Purpose: Now-a-days, domestic capital alone is not enough for economic development of a developing country. Developing countries in fact, seek adequate Foreign Direct Investments always. Although indirect tax increases through FDI inflows, but direct tax does have a negative influence on FDI inflows. This research investigates the impact of FDI inflows on tax revenues in Bangladesh. **Methodology:** The study has been completed based on time series data for the period of 2001–2020, where we considered tax revenue as a dependent variable, and FDI inflow as an independent variable. We also used the simple regression analysis technique for analyzing our data. **Findings:** The results reveal that FDI inflows do have a positive influence on tax revenues, by which, we can affirm that one unit change in independent variable (FDI inflow) increases tax revenues in Bangladesh by 8.22 units. **Implication:** Policy makers, economists, and regulators like NBR along with new researchers shall get an important insight about the impact of FDI inflows on tax. **Originality:** There is hardly any study available on this subject in the context of Bangladesh. Thus, to the best of our knowledge, this is a pioneering attempt, aiming to analyze the impact of FDI inflows on the tax revenue in Bangladesh.

Key words: Bangladesh, FDI inflow, impact, tax revenue
JEL Classification: (C33, H21, E20)

INTRODUCTION

Foreign direct investments (FDI), which come into the country of destination as liability or assets, form important economic possessions, especially for developing economies. In fact, developing nations need FDI to strengthen their economies, and continue their socioeconomic developmental agenda. In simpler terms, FDI is needed to fulfill the country's technical, infrastructural, knowledge, resources, and skill requirements, which by and large, remain limited (Koluman, 2020).

The International Monetary Fund has defined FDI as foreign investments in local companies/organizations/enterprises that exceed 10% of the company's/organization's/enterprise's assets (Nistor and Paun, 2013). FDI is also seen as a type of cross-border investment made by a foreign investor with the objective of establishing a lasting interest in an organization of a host country (OECD, 2008). It is a significant medium for exchange of technology and knowledge between countries; it encourages international trade through access to international markets and can be an important medium for economic development (OECD, 2022).

Tax revenue is the earnings that are collected by governments through taxes. Tax is one of the most important sources of

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capital of a country. Tax is broadly categorized into two (i.e., direct and indirect). Direct tax is forced on earnings, corporate proceeds, properties etc.; on the other hand, indirect tax contains VAT, sales proceeds, import duty etc. (Amin et al., 2018). The Organization for Economic Cooperation and Development (OECD, 2022) defined tax revenue as the revenues collected from individuals' income, business profit, social security contributions, service taxes, payroll taxes, taxes on the possession, and transfer of property and other taxes.

This research aims to analyze the impact of FDI inflows on tax revenues in Bangladesh.

Country's policy of tax relaxation to attract more FDI, through tax holiday, tax credit for new investor, or exclusion of import duty in case of raw materials imports, can affect tax revenues negatively (Mahmood and Chaudhury, 2013). On the other hand, FDI inflows have latent capacity to affect the total tax revenues indirectly through economic activities. Therefore, the ultimate impact of FDI on tax income seems to be theoretically unclear (Bayar and Ozturk, 2018).

As FDI is the most significant source of external resource inflows and takes part capital formation to developing countries over the years, it is considered as a growth enhancing factor. Importantly, FDI boosts the employment level, productivity, exports, and transfer of technology and know-how in the host country (Nasreen et al., 2014). In addition, FDI does have a positive impact on the economic growth of a country (especially developing country), along with its level of income (Ali and Hussain, 2017). Hence, it can help the administration make additional tax income as indirect tax. In the context of Bangladesh, 69.80% (Ahmed et al., 2021) of tax income is collected as indirect tax. Therefore, FDI may have an optimistic impact on the tax incomes in the country. In this study, we try to establish an association between FDI inflows and tax revenues in Bangladesh for the period of 2001–2020 through simple regression analysis. We also use time series data for the said period, because tax revenue related data were not available before 2001.

Research Question

1. How does FDI inflow affect tax revenue?

Hypothesis

H_0 = Foreign Direct Investment inflows have no direct impact on tax revenues in Bangladesh.

H_1 = Foreign Direct Investment inflows have direct impact on tax revenues in Bangladesh.

LITERATURE REVIEW

Sujarwati and Qibthiyyah (2020) conducted a cross-country empirical study on corporate income tax and FDI using an unbalanced fixed-effect method for the period of 2003–2017; the findings showed that CITR has no significant impact on FDI.

Bayar and Ozturk (2018) evaluated the effect of FDI inflow on tax revenues in 33 countries, covering the period of 1995–2014. They found a cointegrating association among FDI inflows, economic growth, and total tax revenues.

Abdioglu et al. (2016) analyzed the impact of corporate tax rate (CTR) on FDI to examine their association by applying the generalized method of moment. Their results revealed that a country attracts higher FDI, when it reduces its CTR.

Nistor and Paun (2013) conducted a study on taxes and its impact on FDI in Romania; they found a strong linkage between corporate income tax and FDI.

Pratomo (2020) studied the relationship among FDI net inflow, Greenfield and Brownfield FDI and tax revenues and its types in the context of developing countries through two stages least square regression. The results showed statistically insignificant positive relationship between FDI and tax revenues in developing countries. Camara (2019) evaluated the impact of FDI on tax revenues from the perspective of developing countries using a system GMM estimator from the period of 1990–2017; the results showed that FDI inflows can significantly increase tax revenues.

In Zimbabwe, Binha (2021) empirically evaluated the effect of FDIs on tax revenue growth from 1980 to 2015. They used the OLS methodology and found that tax revenues effectively raised 1.75% with 1% increase in FDI.

Mahmood and Chaudhury (2013) empirically investigated the influence of FDI on tax revenues in Pakistan and found short-run as well as long-run association between independent and dependent variables; that is, FDI and gross domestic production per-capita have significant positive influence on tax revenues.

Research Gap

Literature review showed that there have been a few studies that have looked to understand the effect of FDI on tax revenues. However, there has not been any study available

Table 1: Model analysis

Regression Statistics						
Regression R	0.72					
R Sq.	0.5219					
Adj. R Square	0.4953					
Std. Error	7.2946					
Observation	20					
ANOVA						
	Degrees of f	**Sum Sq**	**Mean Sq**	**F**	**Sig. F**	
Regression	1	1045.55	1045.55	19.65	0.000	
Residual	18	957.79	53.21			
Total	19	2003.35				
	Coffs.	**Standard error**	**t-Stat**	***P*-value**	**95% (lower)**	**95% (upper)**
Constant	1.88	3.04	0.62	0.54	-4.50	8.26
FDI inflows	8.22	1.85	4.43	0.00	4.32	12.12

Dependent variable: Tax revenue

on assessing the impact of FDI inflows on tax revenues, specifically in the context of Bangladesh.

METHODOLOGY

We used secondary source of data, encompassing the period from 2001 to 2020. Specifically, our main source of data was The World Bank Indicator-2020, Bangladesh Economic Review-2021 and Macro-trends. In addition, we used tax revenues (measured as % of gross domestic product) as dependent variable and FDI inflows (measured as US billion dollar) as independent variable. We adopted simple regression analysis to investigate this relationship.

Simple regression model can be developed as follows:

$$X = \alpha + \beta\,(\mathrm{FDI}) + \mathrm{error}$$

Where, X denotes tax revenues
"α" denotes model constant
"β" denotes coefficient

RESULTS AND DISCUSSION

Simple Regression Model

The obtained model is:

$$\text{Tax Revenue} = 1.88 + (8.22\times\text{FDI})$$

The value of R-square in the above model is 52.19%; it effectively means that approximately 52.19% of the total variation in tax revenues in Bangladesh can be explained by the independent variable (i.e., FDI inflow). In other words, FDI inflow does have a positive influence on tax revenues in Bangladesh, as it is statistically significant, especially given the fact that *P* value is 0.00 at 5% level of significance or at 95% confidence interval. Moreover, it may be noted that the coefficient of FDI inflow parameter is 8.22; this shows the dependability of tax revenue in the country on FDI inflows. Moreover, if the parameter of FDI inflow does change by one unit, then tax revenue in Bangladesh would increase by 8.22 units.

Test of Hypothesis

Table 1 shows that the calculated value of F is 19.65. As the estimated "F" value is greater than table value of 0 [$F_{k,\,(n\text{-}k\text{-}1),\alpha}$ = 0] at 95% confidence interval, so the simple regression model is accepted. On the other hand, as the *P*-value of parameter FDI inflow is 0.00, which is below 0.05 at 95% confidence interval, the null hypothesis can be rejected, and instead we can accept the alternative hypothesis (i.e., FDI inflows have significant impact on tax revenues).

CONCLUSION

Due to global market competition, only home (domestic) capital is not adequate for the growth and expansion of the nations. As a result, developing economies are always trying to attract FDIs to strengthen their economies and continue their development activities. However, FDI inflows are affected both by direct and indirect tax policies. Nevertheless, both these direct and indirect taxes also serve as the main source of national revenue, collected from numerous sources like, individuals, public organizations/enterprises, trades, royalty for using natural resources, and/or foreign aids, donations, and grants. Importantly, although FDI inflows do have a positive impact on tax revenues within the context of a developing country, in reality, they are not able to attract FDI as per their expectation always. Thus, to attract more FDIs, a few recommendations are enumerated: for instance, profit repatriation policy should be simplified to attract more FDIs. Existing corporate tax rate and value added tax policies should be revised. The host country should ensure ease of doing business to encourage foreign investors. There should be a continuous attempt to explore the thriving sectors of the country to attract FDI; and finally, the Foreign Exchange Regulation Act (FERA) should be regularly updated.

The main limitation of the study is that only secondary data for the period of 2001–2020 were used for analysis. Moreover, we only considered the case of a developing country. Hence, there is scope of further research applying primary data, as well as conducting the study in the context of other developing, and even developed countries.

AUTHOR CONTRIBUTIONS

This research was done by all authors mutually. At first, data were collected by Mrs. Munna Rani Biswas, Senior Assistant Commissioner, and then literature review section was completed by Mr. A.K.M. Firoz Alam, Senior Principal Officer. Finally, data analysis and report writing were done by Mr. Subrata Deb Nath, Senior Principal Officer.

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CONFLICT OF INTEREST

There is no any conflict of interest.

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