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Abstract
This paper has investigated the macroeconomic determinants of Foreign Direct Investment (FDI) inflows in Bangladesh by using a period of 1975-2015 and by using ARDL technique for estimation. The cointegration has been proved in the empirical exercise. Further, income, democracy and interest rate are showing positive impact on FDI inflows. But, trade openness is showing a negative influence on FDI inflows. Therefore, this paper recommends some qualitative checks on trade for FDI inflows; promotion in Bangladesh.

Key Words: FDI inflows, Cointegration, Income, Democracy

1. Introduction
The countries with a history of smooth economic and social sectors are desired by foreign countries for long term investment and onward for profit maximization. FDI is the most important factor for the countries to progress. In the past two decades, the FDI by the external transnational corporation (TNC) is become the prime source of the finance for under-developed economies. FDI is generally conceptualizing homogenous flows of capital through which countries earn more profit.

FDI can come up in number of forms. For example, when the foreign firm invests in home country by providing the capital to install a new asset, like a production plant, building and machinery etc. Capital investments are aimed with the expansion of operation level, replacement of worn out or outdated assets and finally renewal might involve rebuilding, retrofitting or overhauling an existent asset. The FDI by host country in form of capital investment has intention to increases the home country firms’ profits and productions which will ultimately benefit the investor.

Merger or Accusation of the firms in home country is a very famous and active kind of investment especially if the previously public operated firms are going to be privatized. In mergers or accusations the countries involved seek their personal interest and do business transactions. An acquiring enterprise of host country purchases the target enterprise of home country. Joint Ventures, actually creates a partnership between the home and host countries for mutual benefits is also a common form of FDI. It is similar to partnership where the home and host country enterprises share in the profits and losses. It generally formed for a specific purpose and may not continue for unlimited period. A contract term also brings inflow of FDI in order to sign a contract among firms of home and host countries like franchises, licenses, etc. Franchising is a business model in which the innovator (franchisor) allows reputation and goodwill etc.

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Financial investments affect the country at micro as well as macro level. Financial investment and onward reinvestment of funds lead to a developed economy which is most desirous and demanding activity for up-to-date capitalistic economies. FDI is hallmark and most debating issue of today’s developing countries and inspired the economist, policymakers. FDI as in international trade is one channels for the globalization of world economy. Insufficient domestic resources can be termed as object gap. The existence of such capital gaps appreciates the inflows of FDI which can modernize the economy. By bridging foreign technology to management techniques and production processes, FDI helps to close ‘object gaps’. FDI is attracted by the improved living standards of the economy.

2. Literature Review

The second most important factor can be assumed the political condition of a country that can be measured through level of democracy. In the relationship of democracy and FDI, Guillermo (1978) argued that autocracy is more attractive to FDI inflow because autocrats face lower constraints and offer more freedom, therefore because of less constraints investors choose to invest in economies with autocratic structure. On the other hand, Jakobsen and Indra (2006) explain that democratic governments may use FDI as a tool of growth to ensure the protection of rights and interests of local citizens and organizations. Moreover foreign investors are attracted towards established competitive markets, to get high incentives. They further added that democracy in a country increases the volume of trade which will increase FDI inflows. Berden et al. (2014) state that from a past few decades, democracy is significantly affecting FDI inflows and it has become a very important concern and crucial topic of research. As FDI inflows have become most important in the world economy. The growth rates of FDI flows are exceeded than those of trade flows. They further state that important determinants of FDI are GDP and Democracy. They claim that more democratic countries attract more foreign investors because democracies provide a stable environment and protection of investment. Mancur (1993) argues that democracy is more attractive to FDI because established democracies are more credible and this political credibility provides more stable and attractive environment to foreign investors for investment.

Schneider and Frey (1985) state that low level of inflation in a country encourage FDI. Low inflation increases FDI if government balances its budget and monetary policy by central bank. Low inflation is symbol of smooth running of country’s policies. Reasons of high rate of inflation are such as economic tension, imbalanced government budget, inappropriate policy of central bank and these reduce the return on investment. Therefore, foreign investors are likely to invest in low and stable inflation environment. Ercakar (2011) investigates long-run relationship between FDI and inflation by using annual data from 1970 to 2008 of Turkey. His estimates show a negative relationship between inflation and FDI. Inflation in high cost country results in low cost imports due to high wages and rise in raw material prices in the local economy. In this connection, trade can substitute the investments. Therefore. Foreign investors usually prefers the economies for investment with low and stable inflation rate.

Jensen (2003) explains the impact of federalism with respect to FDI and Democracy relationship by saying that MNC’s primarily prefer political benefits to invest as well
as economic benefits. A country is considered more credible and trustworthy because of federalism so investors are attracted to such countries because there is low political risk. He conduct research for 114 countries including developed and developing countries stated that countries with more democracy receive more FDI inflows in case they are credible for their local and international commitments. Schneider and Frey (1985) in his research have identified that economic factors are most important for a democratic country to measure the FDI inflows. They find that GNP per capita and secondary education has a positive effect on FDI, more GNP per capita and the larger the share of an age group with secondary education will positively affect a nation’s economic health. Balance of payments deficit, wage cost and inflation has a negative effect on FDI. High inflation rates, high wage cost and balance of payments deficit will bring less FDI inflow. Odedokun (1995) states that Non-Democratic regimes are negatively related to FDI. Such regimes reduce the capital formation and FDI inflows and leads towards a rise in inflation; worsen the balance of payment and balance of trade in a country.

Li and Resnick (2003) argues that under established democracy, host government’s established policies attract the foreign investors but if it provides less incentives to the foreign investors this will hinder the FDI inflows in that country. They in fact said democratic countries can gain their credibility by providing political and legislative stability. Their research covered 52 countries to identify FDI and democracy relationship and explained that though higher level of democracy increase FDI inflows but if consider property rights with democracy, higher level of democracy with improper property rights protection will reduce FDI inflows. If in democracy, property rights are protect it will result in greater FDI inflows. Shah and Masood (2003) conducted an empirical investigation to see the effect of various determinants of FDI by applying co-integration technique advanced, covering time series data of 1960 to 2000. The authors have considered the real economic fundamentals related to FDI and provided specific policy implications which are further worthwhile to the policy-makers and researchers. Highly significant co-efficient for cost of capital, tariff and expenditure on transport and communication are signaling for greater public sector role in attracting FDI in Pakistan.

Since this study is featured to investigate determinants causing inflow of FDI for the economy of Bangladesh, it is thought-provoking to highlight that what are the factors have been leading in attracting FDI to this country. Chowdhry and Mavrotas (2006) employed an innovative study to test the traces of causal relationship between FDI and GDP of three major recipient developing countries of FDI named Chile, Malaysia and Thailand for the period 1969-2000 and found bidirectional relationship causality between FDI and GDP. Apart of above some studies are having conditional results for the positive causal relationship of FDI and its determinants. Puri and Ritzema (1999) every developing country is in a race to draw interest of foreign investors by framing such policies which provide a favorable environment to invest and a leniency in taxation matters. It is an annoying situation to understand that why in spite of many such attractive policies and relaxations still Pakistan is not able to achieve the desire level of foreign investment. The question has varied answers; the primary answer lies in some severe issues i.e. political instability, fragility of economy, non-performing loans, policy weaknesses, dependence of central banks and weak social values. To some greater extent these issues are faced by developing countries in common, on the
other hand developed countries can tackle with them sensibly, which can ultimately bring the ultimate mutual consequence in shape of better economic growth for both home and host countries. Abbas et al. (2011) examined that the countries which having better financial position target FDI more efficiently. Because such economies have high GDP indicating progress and standard of living for state. They also concluded the importance of GDP to efficient utilization of FDI. Kapur and Ramamurti (2001) stated that political instability, weak infrastructure and regional differences of infrastructure, inflexibility of labor laws, change in government and commercial regulations, increased tax and tariff and corruption are the main causes of low FDI inflow. Nawaz et al. (2012) find that fluctuations in extreme changes in the exchange rates are cause by dictatorship and turmoil of democracy which have strong impact of volatile exchange rate on FDI and has a negative impact on Pakistan. Its main reasons are that decrease in the value of the local currency leads to decreased purchasing power, high cost of production and high inflation rate due to which foreign investors feel reluctant to invest.

Hsiao and Shen (2003) examined the relationship between FDI and GDP. This study describes that GDP has optimistically impact on FDI by using the means of least square regressions. Outcome show that GDP proved to be significant and positive determinant for FDI inflows. GDP is a significant and optimistic indicator of FDI flows in host country. They found the two way relationship between FDI and GDP. Javed et al (2013) stated that foreign investors are like birds that are sensitive to go anywhere, but attracted by the places where favorable conditions exist for them. After all they become a financial source to revolutionize the economy and ultimately fulfill the monetary and capitalistic gap of a country to accomplish the cost-effective activities. For the study, authors had applied co-integration and error-correction models which covered duration from 1973 to 2011. It was found that the variable GDP was the most substantial interpreter of FDI in rank of importance.

3. Methodology

Published literature has highlighted many important factors behind the story of FDI. But this paper focuses only on the major macroeconomic factors and float the following model:

$$\text{FDI}_t = f (\text{GDP}_t, \text{DEMO}_t, \text{INF}_t, \text{IR}_t, \text{TO}_t)$$  \hspace{1cm} (1)

In equation 1, dependent variable is for FDI inflows of Bangladesh. On the right hand side of equation, Bangladesh’s GDP, democracy, inflation rate, interest rate and trade openness are taken as independent variables respectively. Time series are utilized for a period of 1975-2015 for estimation. Further, ARDL co-integration is chosen for its superiority of efficiency in mix order of integration. Therefore, it can be applied without unit root test if no series is remained non-stationary after its first difference. ARDL is presented in equation (2). It will be used to find the long as well as short run estimates.
$$\text{FDI}_t = \phi + \alpha_1 \text{FDI}_{t-1} + \alpha_2 \text{DEMO}_{t-1} + \alpha_3 \text{GDP}_{t-1} + \alpha_4 \text{INF}_{t-1} + \alpha_5 \text{IR}_{t-1}$$
$$+ \alpha_6 \text{TO}_t + \sum_{j=0}^{q} \eta_{1j} \Delta \text{FDI}_{t-j} + \sum_{j=0}^{q} \eta_{2j} \Delta \text{DEMO}_{t-j} + \sum_{j=0}^{q} \eta_{3j} \Delta \text{GDP}_{t-j}$$
$$+ \sum_{j=0}^{q} \eta_{4j} \Delta \text{INF}_{t-j} + \sum_{j=0}^{q} \eta_{5j} \Delta \text{IR}_{t-j} + \sum_{j=0}^{q} \eta_{6j} \Delta \text{TO}_{t-j} + \psi_{it} \tag{2}$$

4. Data Analysis

Table 1 shows that our estimated model has long run relationship as F-value from Bound Test is higher than critical values. Further, our estimated model is out any diagnostic issue as all tests are showing p-value greater than 0.1.

Table 1: ARDL Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Long Run Results</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEMO$_t$</td>
<td>0.5416</td>
<td>0.2143</td>
<td>2.5269</td>
<td>0.0266</td>
</tr>
<tr>
<td>GDP$_t$</td>
<td>0.0370</td>
<td>0.0120</td>
<td>3.0865</td>
<td>0.0094</td>
</tr>
<tr>
<td>INF$_t$</td>
<td>6.1628</td>
<td>4.3362</td>
<td>1.4212</td>
<td>0.1807</td>
</tr>
<tr>
<td>IR$_t$</td>
<td>0.1958</td>
<td>0.05087</td>
<td>3.8487</td>
<td>0.0023</td>
</tr>
<tr>
<td>TO$_t$</td>
<td>-0.8905</td>
<td>0.2241</td>
<td>-3.9729</td>
<td>0.0018</td>
</tr>
<tr>
<td>C</td>
<td>-36.2031</td>
<td>8.2793</td>
<td>-4.3727</td>
<td>0.0009</td>
</tr>
<tr>
<td><strong>Short Run Results</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\Delta$DEMO$_t$</td>
<td>0.1213</td>
<td>0.1614</td>
<td>0.7515</td>
<td>0.5762</td>
</tr>
<tr>
<td>$\Delta$DEMO$_{t-1}$</td>
<td>-0.2289</td>
<td>0.1639</td>
<td>-1.3965</td>
<td>0.1983</td>
</tr>
<tr>
<td>$\Delta$GDP$_t$</td>
<td>0.0876</td>
<td>0.0744</td>
<td>1.1786</td>
<td>0.2614</td>
</tr>
<tr>
<td>$\Delta$GDP$_{t-1}$</td>
<td>0.1487</td>
<td>0.0827</td>
<td>1.7973</td>
<td>0.0975</td>
</tr>
<tr>
<td>$\Delta$INF$_t$</td>
<td>1.5954</td>
<td>1.5881</td>
<td>1.0046</td>
<td>0.3127</td>
</tr>
<tr>
<td>$\Delta$IR$_t$</td>
<td>-0.3570</td>
<td>-0.1903</td>
<td>1.8789</td>
<td>0.0843</td>
</tr>
<tr>
<td>$\Delta$TO$_t$</td>
<td>-0.9779</td>
<td>0.1792</td>
<td>-5.4561</td>
<td>0.0001</td>
</tr>
<tr>
<td><strong>F- Value (Bound Test)</strong></td>
<td>4.0143</td>
<td>10% (2.08-3)</td>
<td>5% (2.39-3.38)</td>
<td>1% (3.06-4.15)</td>
</tr>
<tr>
<td>Heteroscedasticity</td>
<td>0.5296</td>
<td></td>
<td>0.8718</td>
<td></td>
</tr>
<tr>
<td>Serial Correlation</td>
<td>0.2299</td>
<td></td>
<td>0.7986</td>
<td></td>
</tr>
<tr>
<td>Normality</td>
<td>1.6071</td>
<td></td>
<td>0.4477</td>
<td></td>
</tr>
<tr>
<td><strong>CUSUM Stability</strong></td>
<td>Stable parameters</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the impact analysis in table 1, democracy is positively affecting FDI in Bangladesh in long run but its short run result is insignificant. It proofs that political stability is remained helpful in raising FDI inflows in Bangladesh. Further, GDP is positively determined the FDI inflows in long and short runs. The market size or income of Bangladesh is also remained effective in the supporting FDI activities in Bangladesh. Inflation is not beneficial nor harmful for FDI inflows as it is showing insignificant effects both in long and short run. Interest rate is showing a negative influence in short run. It may be creating a cost-push effect on the investing decision by lowering the returns of investments but it is showing a positive impact in the long run. In that period, higher interest rate is wining inwards capital flights due to showing higher expected profit and also showing a sound monetary policy for FDI inflows. Lastly,
trade openness is becoming a barrier for inflows of FDI as it is creating negative effects on FDI both in long and short runs. This is an amazing result as this negative relationship is proving the substitution effect between FDI and trade. It means that a higher FDI is reducing the demand for imports by providing the imports’ substitutes by foreign investors in the local productions. Alternatively, it can be explained that higher trade in Bangladesh is closing the doors and opportunities for foreign investors.

**Conclusion**

FDI inflows are major targets of developing countries to fill the gap of savings and foreign exchange in the country. This paper is aimed at finding the macroeconomic determinants of FDI inflows in Bangladesh by using data of period 1975-2015. The empirical exercise exerts that cointegration has been proved in the model. In the long run GDP, democracy and interest rate are positively influencing the FDI inflows in the Bangladesh. But, the effect of inflation has been observed insignificant. On the other hand, trade openness is creating a negative effect on the FDI. Therefore, we can conclude that market size, political condition and interest rate, as indicator of monetary policy, are creating a good and healthy environment for the foreign investors in Bangladesh and consequently attracting a significant amount of FDI with a positive movement in the said variables. On the other hand, trade openness is creating competing effects on FDI inflows and therefore, more openness in trade is harmful for the FDI attracting policies. Based the results, this paper recommends the government to improve the democracy conditions and to frame the policy for economic growth as both variables will in turn attract FDI inflows. Further, trade openness needs qualitative check to make restriction on the products that are locally manufactured by foreign investors in the Bangladesh.

**References**


