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Index of Bangladesh as a destination of FDI: an assessment of FDI impact on socio-economic development

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ABSTRACT

In the age of anxiety, it has been a very crucial task both for the foreign investors (MNCs) and Governments, whether the investment would be viable in consideration of the expected return and sustainability of the project on the one hand, and the socio-economic development of the country on the other.

Foreign investors, while analyzing the viability of the investment project, consider the firm specific factors like internal resources, financial aspects and organisational capabilities as the micro environment, and country specific factors as macro environment in order to make a final decision regarding the international business operation. In this paper, an attempt has been made to simplify the puzzle some process of investment decision by developing an index for Bangladesh as destination of FDI that defines the degree of suitability for the foreign direct investment in Bangladesh on the basis of country specific factors only. On the contrary, the Government can also determine the position of country's competitiveness in the eyes of the MNCs by looking at the index, and it can take appropriate measurers to improve the index on a continuous basis. The six largest multinational companies working in Bangladesh have been interviewed in order to collect primary data for developing the index that justifies its worth and overweighs the literature review. Finally, the paper also proves the relationship between foreign direct investment inflow, and the macro economic development of Bangladesh by suggesting a new model.

Key words: Foreign Direct Investment (FDI); Macro economic development; Location-decision; Considerable factors
JEL Classification: E44; G14

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INTRODUCTION

FDI is now more important than trade as a vehicle for international economic transaction (World Investment Report, 1995). In the age of anxiety it has been a very crucial task, both for the foreign investors (MNCs) and Governments, whether the investment would be viable in consideration of the expected return and sustainability of the project on the one hand, and the socio-economic development of the country, on the other.

There has been a profound change in the international business environment in recent years. The relationship between multinationals and governments is becoming increasingly complex, particularly in emerging markets. The developments in the political environment during the last few years have led to a situation in the global economy, its context and its rules, which has put the various stakeholders under the clouds of anxiety. Managing the interdependence between multinationals, governments and society has thus become a formidable challenge.

Foreign investors, in case of analyzing the viability of the investment project, consider the firm specific factors like internal resources, financial aspects and organisational capabilities as the micro environment, and country specific factors as macro environment in order to make a final decision regarding the international business operation. Foreign direct investment (FDI) has been viewed through several theoretical lenses, with researchers taking different snapshots of the phenomenon. FDI patterns also need to be examined overtime, because factors favouring an MNE's (Multinational Enterprises) initial investment into a country could change, prompting it to more new investment elsewhere.

Several strategic considerations such as increased competitive intensity at the original locations, cost-cutting requirements, which prompt the search for new low-cost production locations, or pressure to enter new markets in response to similar moves by rivals could motivate such shifts. Measures undertaken by various governments in liberalising investment regimes also profoundly affect FDI decisions. FDI trends, hence are a complex, multi-dimensional phenomenon, which needs to be examined from macro economic as well as firm strategy perspectives for a realistic analysis. As regards the level of analysis, ideally FDI should be examined at the firm level, given that each MNEs investment decisions are affected by its unique strategic objectives (Sethi, 2003). Shifts in FDI destinations overtime can, therefore, also be analyzed at country level because the determinants under investigation affect all MNEs uniformly (Freeman, 1978). Currently the country level analysis has become more prevalent and for that reason region level analysis is given more importance.

The success of FDI depends on the optimum combinations of firm-factors and country factors, which support each other in achieving the corporate objectives. Therefore, the trend of FDI inflow to a certain location and FDI outflow from a certain location are assessed on the basis of some variables; in this regard PEST (Political-government: Legal, Economic, Societal; Cultural and Technological) analysis is taken into account in respect of host country and home country environment.

In analyzing the global factors, however, investors tend to consider more rigorously the regional economic integration of the location, global economic environment and international political relation with the host country that affect on a certain location.

This paper basically attempts to study the various types of factors that a firm would consider in selecting a location for FDI regardless of the country or region. A rigorous literature review has been used as the basis of pinpointing the factors as perceived by the foreign investors, that a firm would consider for selecting a location for FDI in Bangladesh. Therefore, an index for Bangladesh has been developed on the basis of foreign investor's opinion with regard to the degree of factors influencing on the location-decision for FDI in Bangladesh. The index would basically help interpreting the degree of suitability of the foreign direct investment project in Bangladesh on the basis of country specific factors only. Moreover, this would also help Government to ascertain the position of country's competitiveness in the eyes of MNCs, and can compare result with the proposed optimum figure. As a result, it can take appropriate measurers to improve attractiveness of the country as a destination for FDI on a continuous basis.

The largest six multinational companies working in Bangladesh have been interviewed in order to collect primary data for making index that justifies its worth. Finally, the paper also identifies the relationship between foreign direct investment inflow and the macro economic development of Bangladesh by using two models; an established model and a new one.

Objectives of the Study

1) Based on the literature review, to identify the factors that MNCs would consider in selecting a location for FDI.
2) To determine the index of the degree of factors available in Bangladesh in the light of the literature review and empirical study.
3) To ascertain the impact of FDI on socio-economic development of Bangladesh.

Methodology of the Study

This study is basically to assist multinational companies in selecting a particular location for FDI on the one hand, and the Government of Bangladesh to take policy implications in order to improve the attractiveness of the country as a destination of FDI on the other.

The study is founded on the literature review of the factors considered in selecting a location for FDI. Hence, the country specific factors are only considered in developing the index of the factors. However, the selected country specific factors are finally measured on the three-point scale by conducting personal interviews with the senior officials of the six multinational companies working in Bangladesh.

In the first part, the factors influencing the selection of a location have been identified from a thorough literature review of the previous research papers published in different international journals. Afterward, the degrees of those factors have been measured on a given scale through personal interviews with senior officials in six MNCs in Bangladesh. In this regard, personal interview of two senior officials from each of the six selected multinational companies have been taken through a structured non-disguised questionnaire using three-point scale to determine the

degree of factors (Factors affecting the location decision of FDI) impacting on decision making as perceived by the foreign investors.

The sample of six Multinational Corporations (MNC) have been purposively selected with the justification that they are the largest MNCs, in terms of the size of investment and operation until 2000, working in the country for more than 13 years. They have longterm experience on the investment climate of Bangladesh as well as represent the nature of true MNCs taking investment decision for FDI in a country. The size of the sample is also rational in terms of the total number of multinational corporations working in the country. One thing that is specially considered here is that the MNCs selected are mostly involved in consumer marketing operation except KAFCO, therefore, their investment decision, marketing strategies and human resource management are highly connected to the people, institution and the Government of the country. Thus, they are in a good position to perceive the right degree for each and every factor considered in selection of a location for FDI. Senior officials chosen from each MNC take part in investment decision making, therefore, their perception is highly representative. However, researchers personally interviewed all the senior officials of the six MNCs, therefore, any possibility of data collection error is eliminated. The senior-level executives from the following six Multinational Corporations were interviewed individually by the researchers:

1) Unilever Bangladesh Ltd.
2) Sanofi Aventis Bangladesh Ltd.
3) Novartis Bangladesh Ltd.
4) Coats Bangladesh Ltd.
5) Glaxo-Smithkline Bangladesh Ltd.
6) KAFCO Bangladesh Ltd. (Karnophuli Fertilizer Company Ltd.- a Japanese investment)

The modal figure of the responses of 12 high officials from the six MNCs is taken into account to determine the degree of factors. The justification of using mode instead of arithmetic mean is the small sample size taken where majority (75%) respondents gave more or less the same reply. As a result, if mean was to be used the result would have been biased because the rest 25% of the sample-result would have influenced the mean-result. Therefore, authors have decided to use mode instead of mean so that the actual figure, which has been marked by 75% respondents is used in making the final valid index. Therefore, it is highly justified to use mode in order to avoid biasness. A three-point scale **(Very good / Sound / Very high =3; Good / modest/ /high=2; Poor / absent / no=1)** has been used to ascertain the degree of influence of all the factors, which are taken into account in making the location-decision for FDI in Bangladesh. The factors, which are in action as strength or weakness, have been rated with positive or negative points based on the given scale to determine the index.

In the second part of the paper, a relationship has been developed between the FDI inflow in Bangladesh and the socio-economic development of the country. Thus, the assessment of the development effects of FDI resorts to one of two general approaches. The first is economic analysis of the relationships between inward FDI and various measures of economic performance.

This is qualitative analysis of particular aspects of MNCs or TNC's (Trans-national Corporations) contribution, without any attempt at calculating a net rate of return (UNCTAD, 1999).In this regard, simple regression method has been used to prove the relationship. In the cross section growth studies between FDI inflow and economic variables, one study reported a significant relationship between inflows of FDI as a percentage of Gross Domestic Product (GDP) and the growth of per-capita GDP across all developed countries for the period of 1960-1985 (Blomstrom, 1994).

Therefore, the high foreign ownership or a large inflow of FDI will increase the importance of trade for the host country, thus affecting growth indirectly (Rahman, 2002). In this study we also took the same variables to prove the impact of FDI in socio-economic development of Bangladesh as mentioned by Blomstrom (1994) (Model-1). As the result of the first study was not very satisfactory and significant, therefore, experimentally we decided to choose other variables i.e. domestic investment and foreign direct investment. We all realize that the GDP depends on the impact of total investment and other macro economic variables. Total investment consists of domestic investment and FDI results the total production in manufacturing and service sectors, thus, with consequences on GDP. We, therefore, tried to prove a correlation, using SPSS, between GDP at constant market price and the domestic investment + foreign direct investment, while other variables were not taken into calculation. Hence, domestic investment and the FDI are the independent variable and the GDP at current market price is the dependent variable (Model-2).

However, the economic effects of FDI are almost impossible to measure with precision. Trans-national Corporations (TNCs) or Multinational Corporations (MNCs) represent a complex package of attributes that may vary from one host country to another. These are difficult to separate and quantify where there is no precise method of specifying factual development, that is to say what would have happened if a TNC or MNC had not made particular investment in a certain country?

Key factors affecting on selection of a location for FDI:

A company should be better off by going to those countries with economic, political, cultural and geographical conditions that permit it to utilize its competencies. Because company's motives and competencies may differ substantially, what may be a very attractive country for one company may be at the same time, unattractive to another? Nevertheless, the choice of foreign location should be based on the questions ***'where can we best leverage our already developed competencies?'*** and ***'Where can we go to best sustain, improve or extend our competencies?'*** (Daniel, 1998).

Prominent empirical studies that investigated the location advantage-based variables of the OLI triad found that market size, market growth, barriers to trade, wages, production, transportation and other costs, along with political stability, psychic distance, and host government trade and taxation regulation affected the location decisions (Dunning, 1993). Root and Ahmed (1978) investigated taxation and government policies, using the statutory corporate tax rate as a proxy for the effects of fiscal policies on new investors while Nigh (1985) emphasized the positive effect of the political stability, and Contractor (1991) investigated the consequences of

government policies on the selection of FDI location (Sethi, 2003). However, an analytical presentation is required here to pin point the key factors and its degree of influence in selecting a particular location for FDI.

Host Country Economy, Demography & Institutional Infrastructure:

Revenue Cost factor -Risk:

Investment decisions are made on the basis of expected opportunities versus risks. Opportunities, in turn, are determined by revenues and less cost. From a broad scanning perspective, there are variables that indicate the amount of revenue, cost factors, and risk that might be forthcoming from one country as against another. The factors that have the most influence on the placement of sales and production emphasis on market size, ease and compatibility. Some of these variables are more important for sale allocation decision; another is more important for the production allocation decision; while some affect both. Either way, management must make projections about what will happen to future sales. Such data as GNP, per capita income, growth rates, and size of the middle class and level of industrialisation, inflation rate often are used as broad indicators of market size and opportunity (Daniel, 1998).

Influential Financial Variables- Risk:

Companies use a variety of financial techniques to compare potential projects in terms of different locations, including discounted cash flow, economic value added, payback period, net present value, return of sales, return on assets employed, internal rate of return, accounting rate of return and return on the equity (Daniel, 1998).

Monetary Risk:

If a company expansion occurs through direct investment abroad, access to the invested capital and the exchange rate on its earnings are key considerations. Liquidity preference is the theory, which suggests that investors usually want some of their holding to be in highly liquid assets on which they are willing to take a lower return (Lesleie, 1996). Therefore, investors must assess the risk level of host country currency, exchange rate fluctuation, foreign debt and currency reserve of the country.

Competitive Risk factor:

MNCs are always looking for the markets where entry barrier is not strong enough to overcome the competitive risk and monetary risk (Kanabayashi, 1992). Therefore, number of competitors are also a crucial factors considered in the selection of a location. Besides, forward and backward linkage of the industry in a certain country is also important factors that MNCs must consider for foreign direct investment.

Cost and Resource Availability:

The analysis is some what simpler for a resource that is to be transferred, such as raw material

or technology, than for a resource that will be used to make a product or component abroad for export into other markets. A company eventually must examine the costs of labour, raw material inputs, capital, taxes and incentives provided by host Government, transfer costs in relation to productivity in order to determine a least-cost location to enjoy the benefit of economies of scale (David, 1994).

Institutional Prerequisites considered:

The role of governments in providing an environment conducive to FDI cannot be over-emphasized. First of all they need to establish prerequisites such as a stable political and economic environment, the rule of law and secondly, the infrastructure. An educated and technically skilled work force, low wage, an open economy and stable currency are also essential (UNCTAD, 1997). Most of these prerequisites can be examined through the lens of macro institutional economies (North, 1991).

However, governmental issues such as project specific incentives, tax breaks, restrictions on investment limits, majority control and profit repatriation, stipulations about local content, technology transfer and export requirements are also taken into account in choosing a particular location. Only a comprehensive evaluation of these aspects can yield a holistic picture of whether the prospective FDI destination is investment-friendly or not (Williamson, 1985). Furthermore, a case shows how national responsiveness can resist globalisation- *'The Bangladesh High Court has ruled that Government approval (considering the labour union's movement and public sentiment) for the construction of a private container terminal by a U.S company at Chittagong was granted illegally'.* The decision is likely to hit FDI flows in Bangladesh, as this was the largest FDI project in the country's history. The scheme was being financed by Stevedoring Services America (SSA), which had already bought 162 of 200 acres coastal land it needs to build the US$550 million port (Financial Times, 2002).

It is apparent that these exacting factors are unlikely to be met by any country entirely. Developing countries, especially, can not measure up to the same standard of prerequisites in comparison to developed countries, therefore, the FDI destinations originally seem to be in favour of the developed countries over the last twenty years, but the trend is changing towards the developing countries. Consequently, the MNEs (Multinational Enterprises) could have a different mix of FDI determinants for them. Thus, the imperative to reduce costs could force MNEs to trade-off the ideal mix in favour of low-wage benefits, as we see in China, India and recently in Bangladesh (Recently, TATA has shown interest to invest $2 billion in Energy, Fertilizer and Steel sector in Bangladesh. The interest is the result of the availability of cheap source of raw material, favourable incentives offered by the Government and the size of the market.)

Red Tape:

Companies frequently compare the degree of red-tapism necessary to operate in given countries. Red tape includes such things as how difficult it is to get permission to operate, to bring in expatriate personnel, to obtain licenses to produce and sell certain goods, and to satisfy government

agencies on such matter as taxes, labour conditions, and environmental compliance .For example, Ukraine has thousands of government employees who have the power to block exports, ban sales, levy licensing fees, seize money from private bank accounts and generally cause trouble for foreign businesses (Brzezinaski, 1994).

Technological Advancement:

Companies also place an emphasis on technological development of the host country and support services available with company personnel. They also assess the degree of restriction on the percentage of ownerships and remittance of profits. Recently, we see the software investments are heading towards India (Bangalore).

Geographic- language- market -similarities:

Companies are highly attracted to countries; that are located nearby, that share the same language, that have conditions similar to those in their home countries (Daniel, 1998). Therefore, it might seem that companies would go first to those countries where economies are most correlated with that of the home country.

Many previous studies have found cultural proximity to the home country to be a significant determinant of FDI (Dunning, 1993). But now days, due to globalisation, the effect of cultural distance is likely to get diluted progressively. Moreover, MNEs might also be compelled to ignore the greater cultural distance of developing countries in favour of their low-wage advantages and opt for them as the 'next best' locations. Notwithstanding each MNE's unique FDI location decision, collectively these reflect integrated regions rather than specific countries (Sethi, 2003).

Table: 1.1

Factors available and their degree of presence in Bangladesh that affect on selection of a location for FDI

Country-level Factors (Strength for Bangladesh)	Degree of factors (Xi)	Conversion in figure	Country-level Factors (Weakness for Bangladesh)	Degree of factors (Yi)	Conversion in figure
Market growth (GDP growth)	Good	2	Corruption in Govt. machinery	Very high	-3
Growing demand of variety products	Very good	3	Red tape	Very high	-3
Inflation	Modest	2			
Fall of trade barriers	Very high	3	Foreign debt	High	-2
Export requirement	Modest	2			
National responsiveness	Modest	2			
Cultural integration	Very high	3			
Opportunities in Export processing zones	Very good	3			
Law and order situation	Modest	2			
Stability of TAKA against hard currencies ($,€,£,¥)	Poor	1			
Physical infrastructure	Good	2			
Taxation regulation/ Corporate tax rate & incentives.	Good	2			
Profit repatriation	High	2			
Currency reserve	Poor	1			
Forward and backward linkages	Poor	1			
Capital market	Poor	1			
Educated and technically skilled work force	Poor	1			
Technology transfer	Poor	1			
Export facilities (Air and shipping)	Poor	1			
Wages of labour	Very good	3			
Transportation	Good	2			
Political stability	Modest	2			
Psychic distance	Modest	2			
Total figure	$\sum X_i$ =	**44**	$\sum Y_i$ = **-8**		

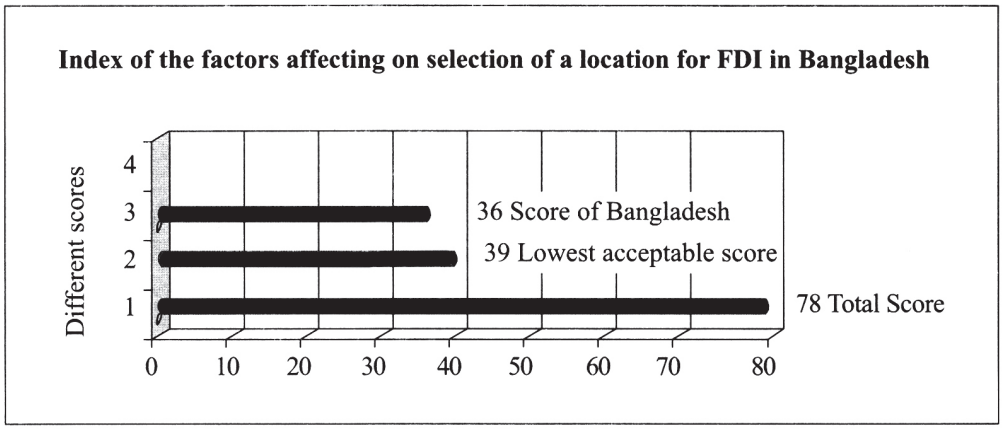
Note $_1$: In the personal interview, the senior executives were given some multiple choices to rate the degree of each factor available in Bangladesh from their own point of view. The choices are as shown:

Very good / Sound / Very high =3; Good / modest/ /high=2; Poor / absent / no=1

(Since it is the question of weakness, the same scale will be applicable but the rating figure of the factors will be **negative.**)

$$\text{Index}_2 \text{ of degree of factors for FDI: } |\Sigma X_i| - |\Sigma Y_i|$$

Figure:1.1



Note$_2$: This index has been developed on the basis of country-specific factors only, which affect on location-decision for FDI in Bangladesh.

It should be noted that considering the nature of different country specific factors, executives during the personal interview, were given more than one choices in each category in order to rate the factors, so that the degree of different types of factors is properly determined.

It can be observed that out of (26 factors X 3) = 78 point-scale, Bangladesh as the destination of FDI has received (44-8) = 36 point-score, which is below 50% of the total score. Therefore, the study offers a proposition that Bangladesh does not have a very congenial atmosphere yet for FDI. But it can be an ideal place for FDI as long as the mentioned negative factors are transformed into positive. ***It is assumed that a country, which has been found to have potential, must score at least fifty percent of the total figure i.e. 39.***

It needs to be noted as indicated earlier that the figures used in the box of weakness have been denoted as negative because these factors are adversely hindering the progress of whole economy; as a result the country is found to be unattractive place for FDI. However, the score found from the study is very close to the permissible figure of 39, therefore, this study also shows that there is a ray of hope that Bangladesh can become an ideal place for FDI as long as the Government initiatives are sincerely undertaken in order to improve the situation.

A critical analysis of the factors available in Bangladesh:

Table 1.1 gives a clear picture of the factors (Country-specific) available in Bangladesh that influence the selection of a location for FDI, from MNCs point of view. The opinions based on the personal interview of the senior level executives from six multi-national companies have been recorded in the above table in order to determine the degree of each factor. The factors used in the index table for Bangladesh have been segregated in two columns (One is **strengths** and another is **weaknesses**) based on the degree of their impact on investment project.

The table, on the one hand, shows the rays of hope that Bangladesh possesses the factors that can influence the location-decision for FDI, such as favourable Government policy towards FDI, growing demand of variety products, rapidly growing market, available raw material inputs such as Gas, Coal, Agri-produces etc, along with good infrastructure, cheap labour, favourable economic climate and so forth. Considering the factors those have been attributed very good or good, it can be presumed that Bangladesh has the capacity to attract FDI in labour intensive industries, raw material based industries (raw material which are cheaply available in Bangladesh) such as Coal, Gas, Agri-sector and infrastructure development sector.

On the other hand, some factors which have been attributed as negative, are strongly discouraging foreign investors in making positive decision for FDI in Bangladesh. The negative factors are the high degree of corruption in government, red tapism and high level of foreign debt. Moreover, unavailability of skilled and technical labour force, frequent currency fluctuation, poor level of foreign currency reserve, poor condition of backward and forward linkage and insufficient export facilities (Complexities and poor service rate in air cargo and seaport management), may also hinder FDI inflow to Bangladesh. In most cases foreign companies, who have no previous experience about Bangladesh, are discouraged to invest due to have these factors.

In other words this study reveals that in case of Bangladesh, poor law and order situation and high corruption are paid special attention by the foreign investors before making the location-decision for FDI. Moreover, poor law and order situation, high corruption and red-tapism are the consequences of weak political culture and unstable political condition of the country that eventually will discourage foreign investors from choosing Bangladesh as a destination for FDI.

Therefore, if the Government can urgently address these issues the climate for foreign direct investment will definitely improve. Although recently the current Government has taken these matters into serious consideration and is trying to improve the law and order situation as well as tackle corruption by forming two newly active departments e.g. Rapid Action Battalion (RAB) and Anti-Corruption Commission, which has resulted in some very positive effects. Moreover, the donor agencies such as World Bank, ADB, and DFID are now focusing on reducing corruption from all levels in order to make Bangladesh a good place for FDI, given there exists a substantial potential in Bangladesh in this regard. As a consequence, a company from USA, as well as TATA from India and other multinational companies have shown their interest to invest large amounts of foreign currency in Bangladesh.

Analysis of Capital Inflow and the Reasons behind the Downward Trend:

Based on historical perspective, we understand that almost all MNCs are looking for low-wage, cheaper supply of resources and substantial market size to increase their competitiveness as well as their profits. From Table: 3.1(Appendix 1.2), we see a surprising trend of FDI inflow to Bangladesh during the period from 1994 to 2003.We see a downward trend of FDI inflow from US$ 14ml. in 1994 to US$4 ml. in 1996. However, we then see a dramatic upward trend of FDI inflow of US$ 141 ml. in 1997 to US$280 ml. in 2000. Again it starts declining in 2001 and 2002 with a figure US$79 ml. and US$ 50 ml. respectively. But in 2003 the amount of FDI inflow again rises to US$121 ml.

The reason behind the downward trend can be explained by the deterioration of law and order situation and the high degree of corruption in the country during that time, which resulted from unstable political condition. From the very beginning Bangladesh Government has been offering a very attractive package (Incentives and facilities) to the foreign direct investors. Even then, the amount of FDI inflow came down in some years?

During 1994 to 1996 there was extremely bad political condition in the country resulting from the political movement of opposition against the newly elected Government, which caused poor law and order situation. The country had embraced democracy for the first time since liberation war in 1971.Despite democracy; there was legacy of autocratic rule of nine years until 1990. As a result neither opposition nor ruling party could learn how to practice democracy in the greater interest of economic development of the country. At the end of the first ever democratic Government (1991 to 95) the opposition started a political movement against the ruling party in 1993 and created an unstable political situation. However, that unstable political crisis lasted until the following election in 1996. So the downward trend in FDI during 1994 to '96 caused by the unstable political condition continued.

Moreover, in 2000 Bangladesh was ranked on the top, in the list of corrupt countries in the world, and the condition of law and order situation became really bad during the period from 2000 to 2003. During these years the FDI inflows fell further.It can, therefore, be inferred from the study that the two main reasons of the downward FDI inflow are the poor law and order situation and high corruption in the country.

On the other hand UNCTAD (1999) had further projected that FDI inflows will average about US$ 900 million annually during 2000-2010, as compared to US$ 620 million annually during 1992-2000. The principle recipient of the inflow, if current trend continues, will be the telecom, manufacturing and services sectors and could overtake energy by 2006 (Satter, 2000). This prediction is already becoming a reality.

Impact of FDI in socio-economic development of Bangladesh

Most developing countries, including Bangladesh, today consider foreign direct investment (FDI) as an important resource for development. FDI inflow in Bangladesh has still been smaller as compared to what has been flowing into other countries of the region. Though China, Thailand and the Philippines remained the most favored destinations for foreign investors, the FDI inflows

into Cambodia, Vietnam, Pakistan and Sri Lanka have out stripped Bangladesh.

The literature of international business is consistently suggesting the importance of the study of FDI as one of the driving forces of globalization, with significant impact on the socio-economic development of a country. As Bangladesh cannot remain out of the ambit of globalization, therefore, measuring the impact of FDI inflow in the country is necessarily required in order to understand the relationship between economic development and the FDI inflow. This should help the Government to pay more attention to attracting FDI by redesigning its offers to the foreign investors on sectoral basis.

Impact analysis af FDI inflow in the socio-economic development of Bangladesh:

Analysis of the model-1:

In the study of model-1, we took FDI inflow as percentage of GDP at constant market price as independent variable and the GDP growth as the dependent variable in order to prove the relationship between FDI inflow and the economic development. However, (Appendix-1) the model-1 shows the R2 to be .596 (see Table: 2.2), which means that the correlation between the GDP growth and the FDI as percentage of GDP is 59%. It is also shown in the table: 2.3 and table 2.4 that the result is statistically highly significant as indicated by the F and T test statistics. However, the value of R2 shows that FDI inflow, as percentage of GDP, does not regress satisfactorily on the GDP growth of the country; therefore, we again use different independent and dependent variables to obtain better result (See Model-2/ Appendix-1.2 and Appendix-1.3, based on data from selected years only).

Analysis of the model-2:

In the analysis reported in model-2, we used domestic investment and foreign direct investment as the independent variable and GDP at constant market price as dependent variable to check whether the relationship is significant. Here, we did not get a very good result. The value of R2 is 0.990 (Table: 3.2), which suggests that the independent variables such as domestic investment and FDI, regress significantly on the dependent variable GDP, while the F test and T test (Table: 3.3 & Table: 3.4) also show that the regression is statistically significant. However, the result of the T-test for the single regression between FDI inflow and the GDP is 0.645 and the Beta is 0.022, which suggests that FDI has a very small impact on GDP indicated by the insignificant percentage. Hence, the result of the T test can be explained in the way that the FDI inflow suddenly fell in 1995, 1996, 2001 and 2002. Therefore, there was a skewed trend of FDI inflow in the country that resulted in the less then significant figure of 0.645 for the T-test. Nevertheless, the value of R2 is significant and establishes the significant relationship between the Domestic Investment + FDI inflow and the growth of GDP at current market price, while at the same time it also indicates the major impact on GDP made by domestic investment if we consider the of Beta value of 0.983.

We have further examined (see appendix-1.3) the regression through SPSS excluding the years when FDI inflow sharply fluctuated. The value of R2 is 0.998, and F is 0.044 (see Table: 4.3 & 4.4), which indicates a high correlation with excellent significance. But, again the

value of Beta for FDI is 0.002 (Table: 4.5), which indicates its very minimum impact on GDP. We can justify the matter in the way that the amount of FDI inflow as compared to domestic investment is hundred times lower; therefore, it is obvious that the Beta for FDI would definitely be insignificant. Anyway, it is undoubtedly clear that there is definitely a relation between FDI inflow and GDP, and it can be much stronger as long as the trend is linear and the amount is closer to the domestic investment. The years when FDI fluctuated have already been explained with specific reasons i.e. poor law and order situation, corruption and red-tapism that resulted from bad political cultural and instability.

As we all realize that a developing countries like Bangladesh is undergoing some unstable political conditions that eventually result in poor law and order situation, high corruption, unsound investment policies, poor infrastructure etc., therefore, obviously the trend of FDI inflow will not always be moving up or be stable. In other words any sudden fluctuation in the trend will not give better result in case of calculation of regression. In this regard, along with Blomstorm's model, we can also use the model-2 with necessary examinations as used in appendix-1.3.

The following equation, therefore, can be used to measure the impact of FDI inflow in the socio-economic development of the developing countries:

$$\mathbf{GDP = Idi + Ifdi + Z}$$

Where:

GDP at constant market price = dependent variable
Idi= Domestic investment as independent variable
Ifdi= Foreign direct investment as independent variable
Z= Statistical error

Diversified Product Composition: One major feature of the flow of FDI to the developing countries as a whole has been a shift in emphasis overtime from extractive industries and agriculture to manufacturing and modern industries. This pattern has been found to hold well in the case of Bangladesh as well. One study estimated that in the pre-liberation period tea, petroleum and pharmaceuticals accounted for about two-thirds of the TNC sales. And in independent Bangladesh, the said three sectors constituted less than 10 percent of the total TNC sales. The TNCs are now engaged in producing a wide variety of products including food-processing, ready-made garments, electrical goods, leather goods etc. (IFC, 2000)

Value Added: Since most of the TNCs are involved in assembly type of production and usually are found to refrain from basic manufacturing, they are not expected to generate substantial value addition. However, a study on Bangladesh by the World Bank (1999) estimated around 25-30 percent value addition by the TNCs in the ready-made garment sectors only. In the electronics, pharmaceuticals and leather sectors value addition is not significantly high enough, although some experts put the statistics to around 10-15 percent.

Employment Effect: The total industrial employment in Bangladesh is estimated at around 4.5 million (GOB, 2000). It is not possible at the current state of knowledge to determine the number

of employment generated by the FDI-related industries as there is no official data available in secondary sources. On the whole, with a few exceptions, TNCs are found to be relatively more intensive in operation compared to their local counter parts. This means TNCs in Bangladesh have generated less employment per unit of investment. Equally true is that TNCs generally preferred to employ relatively better-trained and skilled personnel. This also alternatively confirmed that the contribution of TNCs in generating employment is minimal except the ready-made garment sector and the three export- processing zones of Bangladesh (Asian Development Bank, 2000).

Competition: There is evidence to suggest that foreign firms have increased competition among the local entrepreneurs in industries, which do not require high technology. Examples are the marine food processing, ready-made garments, leather goods industries. Even in the pharmaceutical sector, particularly after the introduction of Drug Policy by the Bangladesh Government in 1982, many local enterprises have been set up; the stiff competition and changed milieu have forced some TNCs to withdraw from the country. Similarly, tobacco, shoe, and electrical industries have also experienced an increase in the market share of local firms (WTO, 2000)

Socio-Cultural Effect: Socio-cultural impact of foreign firms is generally judged in terms of their social welfare projects, donations to charitable organizations, sponsorship in games and sports, and projecting other cultural activities in the host country. In Bangladesh, a number of TNC units appear to be making the same contributions in this regard although any attempt to quantify the same in terms of financial expenditure has not been made until recently (Rahman, 2000).

CONCLUSION

The study reveals that all determinants discussed here are not effectively crucial in choosing a particular location for foreign direct investment; rather it is dependent on the kind of FDI project. Nonetheless, overall country environment should be supportive of the FDI in terms of other factors. All the factors, which have been discussed here, can fall into two categories of FDI. On ***the one hand the market / resource- seeking FDI,*** the trend which we see in developing countries and on the other hand ***the knowledge/ efficiency- seeking FDI,*** the trend that we see in sophisticated technological projects. In the analysis of the factors available in Bangladesh that affect the location-decision of FDI, we observe a modest picture, although the index of the degree of factors is not optimum for Bangladesh. But the optimistic news is that the Government is becoming very alert to ensuring a congenial atmosphere for FDI and is offering a very good package to attract the foreign investors. Even then, some crucial socio-economic factors such as law and order situation, corruption, foreign currency reserve, technical and skilled labor force should adequately be addressed in order to create a credible environment for FDI. It has already been recognized by the foreign investors' community that Bangladesh has cheap labor and resources that motivate them to come forward with new investment proposals, but the socio-economic factors are the most important issues to the world business community that often hinder FDI inflow in the country.

The study, however, reveals that there is a correlation between FDI inflow and the GDP growth, which eventually results in high economic growth and social welfare. From the quantitative and qualitative analysis it can be said that the impact of foreign direct investment on the social and economic development of Bangladesh is found to be very positive in recent years.

APPENDIX: 1.1

Table: 2.1

Year wise FDI inflow as percentage of GDP and GDP growth

In million $US

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
FDI inflow as % of GDP	0.0414	0.0290	0.0098	0.2954	0.3202	0.3938	0.5942	0.1681	0.1044	0.2331
GDP Growth	4.0800	4.9300	4.6200	5.3900	5.2300	4.8700	5.9400	5.2700	4.4200	5.2600

Data source: UNCTAD World Investment Report 1993-1996;2004 & Bangladesh Bureau of Statistics (2004)

Calculation of Regression -Model: 1

Table: 2.2

Model Summary: 1

R	R Square	Adjusted R Square	Std. Error of the Estimate
.772	.596	.546	.3606

a Independent variable: (Constant), FDI inflow as % of GDP

b Dependent Variable: GDP growth

Table: 2.3

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.538	1	1.538	11.826	.009
Residual	1.040	8	.130		
Total	2.578	9			

a Independent Variable: (Constant), FDI inflow as % of GDP

b Dependent Variable: GDP growth

Table: 2.4

Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.517	.181		24.949	.000
FDI as % of GDP	2.210	.643	.772	3.439	.009

a Dependent Variable: GDP growth

APPENDIX: 1.2

Table: 3.1

Year wise GDP, domestic investment and FDI inflow

In million $US

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GDP at constant market price	33854	37940	40726	42319	44033	45713	47125	46988	47871	51914
Domestic investment	6216	7243	8139	8645	9385	9965	10570	10769	10959	12030
FDI Inflow	14	11	4	125	141	180	280	79	50	121

Data source: UNCTAD World Investment Report 1993-1996; 2004 & Bangladesh Bureau of Statistics (2004)

Calculation of Regression -Model: 2

Table: 3.2

Model Summary: 2

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.995	0.990	0.987	606.5236

a Independent variable: (Constant), FDI Inflow, Domestic Investment

Table: 3.3

ANOVA

Source of variation	Sum of Squares	df	Mean Square	F	Sig.
Regression	249649791.886	2	124824895.943	339.317	.000
Residual	2575096.214	7	367870.888		
Total	252224888.100	9			

a Independent: (Constant), FDI Inflow, Domestic Investment

b Dependent Variable: GDP at constant market price

Table: 3.4

Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	16883.172	1129.253		14.951	.000
Domestic investment	2.857	.132	.983	21.704	.000
FDI inflow	1.317	2.738	.022	.481	.645

a Dependent Variable: GDP at constant market price

Appendix-1. 3

Table:4.1

Excluding the out layer, the data between 1997-2000: GDP, domestic investment and FDI inflow

In million $US

Year	1997	1998	1999	2000
GDP at constant market price	42319	44033	45713	47125
Domestic investment	8645	9385	9965	10570
FDI Inflow	125	141	180	280

Data source: UNCTAD World Investment Report 1993-1996; 2004 & Bangladesh Bureau of Statistics (2004)

Experiment with only selected year's data

Table: 4.2

Calculation of Regression excluding the (out layer) years when FDI inflow was fluctuating

Variables Entered	Variables Removed	Method
FDI, DI(a)	.	Enter

a. All requested variables entered.

b. Dependent Variable: GDP

c. Independent Variable: FDI- Foreign direct investment, DI- domestic investment

Table: 4.3

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.999(a)	.998	.994	158.26386

a Predictors: (Constant), FDI, DI

Table: 4.4

ANOVA(b)

	Sum of Squares	df	Mean Square	F	Sig.
Regression	12957771.550	2	6478885.775	258.664	.044(a)
Residual	25047.450	1	25047.450		
Total	12982819.				
	000	3			

a Predictors: (Constant), FDI, DI

b Dependent Variable: GDP

Table: 4.5

Coefficients(a)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	20441.338	2175.999		9.394	.068
DI	2.525	.282	.997	8.964	.071
FDI	.051	3.325	.002	.015	.990

a Dependent Variable: GDP

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