

ECONOMIC LIBERALIZATION IN NEPAL: DETERMINANTS, STRUCTURE, AND TRENDS OF FDI

Raghu Bir Bista

Department of Economics, Tribhuvan University, Nepal
Bista3@hotmail.com

ABSTRACT

This research examined the relationship between Foreign Direct Investment (FDI) and Gross Domestic Product (GDP) along with the impact of FDI determinants on FDI inflow in Nepal. This research used literature review by doing multiple regression models. This research applied an econometric model based on Cobb Douglas Production Model and a theoretical growth model based on Solow Growth. The result indicates the positive relationship between GDP and FDI. Furthermore, liberalization and privatization policies are positive, but insecurity is disturbing.

Keywords: *Gross Domestic Product, GDP, economic liberalization, Foreign Direct Investment, FDI*

INTRODUCTION

In the 1990s, there was an open development policy debate on how to develop countries with higher economic growth and how to tackle major economic issues, such as unemployment and poverty under resource constraint. Behind this development thinking, there was the expectation of the people and problem of critical subsistence households. As its economic cure, Nepal adopted economic liberalization to minimize public expenditure burden of lost public enterprises, mobilize private savings, investments, and FDI (Foreign Domestic Investment) as well as to meet Multilateral Donors conditions of economic reform. Despite controversy on economic liberalization and privatization process, all sectors were liberalized for private and foreign investment through Industrial and Foreign Direct Investment (FDI) Policy of 1992 (HMG, 1993), except for a few national sensitive areas. In addition, fiscal barriers in international trade and market competition inside the country were well-tuned through Value Added Tax (VAT) introduction under fiscal reform (MoF, 1995). Nepal did trade liberalization, despite the non-compatibility bilateral trade treaty. Consequently, economic liberalization was adopted for FDI inflow.

There is policy logic behind FDI inflow for technology and knowledge inflow, management transfer and extension of export destinations, along with domestic market competition in labor market, good market, and money market. The issue is whether the policy logic is realized in reality, in ex-ante, or not at all. This research deals with this issue. The research's main objective is to estimate the impact of liberalization on FDI inflow in Nepal and the effect of FDI inflow in GDP. In addition, the research analyzes the structure and trend of FDI inflow in Nepal. This is followed by an econometric model. Its data sets are time series and secondary sources.

Economic liberalization has no regulation in the market. In other words, the government leaves economic activities (investment, production, and distribution) in the market with the assumption of the fair and free price mechanism and competition. How compatible this approach is in a developing country like in Nepal, where markets of labor, goods, and money are imperfect under natural monopoly, social justice, and welfare of mass people, is a serious issue to be addressed. Thus, the debate on this issue is

going on. Some literature is critical on its positive impact on the argument of the imperfect market and irrational consumers. However, policy literature has expected positive effect from economic liberalization and FDI. NPC (1992) and Industrial Policy of 1995 provide arguments behind it, which are (1) Nepal has surplus and the cheapest labor with comparative advantage to FDI firm, (2) there is accessibility to Indian market, (3) there is no regulation of currency convertibility and share equity in FDI, (4) Nepal does not have higher corporate tax and strictness on direct tax, (5) Nepal provides fiscal safeguards to FDI firms in rural areas, (6) there are open economic sectors for FDI and nature of FDI, and (7) there are various resource potential areas such as water resources and tourism. This expectation is supported by the economic theory of the firm. The comparative advantage of cheapest labor can reduce the marginal cost of product and substitutability potentials between factors of production. As a result, it would be an excessive marginal benefit for FDI firm.

Although FDI firms are naturally profit motive, direct and indirect positive impact of the firms is expected. Policy literature provides arguments behind it; they are (1) entry of FDI firms in Nepal will bring technology, knowledge, brand, and management along with the scale, quality, and quantity. (2) Demonstration effect of FDI firm will motivate the domestic firms to adopt and explore technology and management, improving scale, quality, and competition. (3) The entrance of FDI firms will increase market competition in the domestic market and competitive capacity in the international market. (4) Export destination and volume will be intensified. And (5) there is a great prospect of developing labor and money market. Besides that, the subsequence of export promotion, market competition, and FDI inflow will be positive on fiscal potentials, employment creation, reduction of trade deficit, competitive price of qualified goods, availability of various goods, and consumer decisions.

Theory of firm in microeconomics explains the firm as a profit motive. In order to make the profit, the firm has two problems, profit maximization, and cost minimization, which depend on the types of market. In economic liberalization, there is a possibility of transformation from the monopoly market to perfect market. Products' price depends on the demands of consumers, substitutability, and competition. The firm can only minimize the cost of production through factors production and scale of production. However, in developing countries, the FDI firm behaves like a monopolist which has no positive impact. Vast literature supports this argument. Some literature finds FDI firm bigger than government and tax manipulator. Moreover, some literature also finds no corporate responsibility of the firm.

In Nepal, there are a few kinds of literature who study the impact of FDI such as Bista (2005), Dahal, Nepal, and Aryal (2005), and Rana & Pradhan (2005). Bista (2005) and Dahal, Nepal, and Aryal (2005) found the positive impact of FDI in Nepalese economy, but with different methods. Bista (2005) examined effects of FDI in Nepal through case study method. His result was the positive effect of FDI on employment, local development, CSR (Corporate Social Responsibility), and economic growth, despite small inflow of FDI. However, the study has not dealt with FDI's effect on industrial productivity. On the other hand, Dahal, Nepal, Aryal (2005) found poverty linkage of FDI. Similarly, Rana & Pradhan (2005) suggested the requirement of FDI performance measurement.

Statistics of FDI from UNCTAD 2016 provides FDI inflow trend picture. Aggregate FDI inflow in the region tends to incline to the trend with significant growth. In regional disaggregate FDI flow by country, there are heterogeneous trends. For example, in Bangladesh, FDI inflow trend line is found inclining with higher growth rate per annum. Furthermore, the size of FDI is also significant. However, in Nepal, FDI inflow trend line is fluctuating and declining trend with negligible size. This Nepalese FDI inflow is the opposite of South Asian FDI trend.

While FDI trend in Nepal, policy expectation, and delivery reality are two different sides of a coin but have a consequential move relationship between them. The delivery reality of FDI, which is the reflection of FDI policy and expectation, is illustrated by FDI size, trend, and structure. These three indicators explain whether economic liberalization and FDI policy are able to deliver policy thrust. They

also explain whether the policy is effective to attract FDI as required and as expected, as well as where we are at the regional and international level.

The expectation of policy literature on FDI inflow is not supported by the size of FDI inflow in Nepal. In accordance with WBI in Gould, Tan, and Emamgholi (2013), the FDI size is less than 1 % in South Asia. When we observe its GDP size, it is negligible, despite labor surplus and comparative advantage. The Economic situation in Nepal indicates deserving country for it, like other developing countries. The direction of FDI in the World is market driven rather than deserving country. What to do in the condition of possible FDI shock, its investment and technological multiplier effects may puzzle the policy maker.

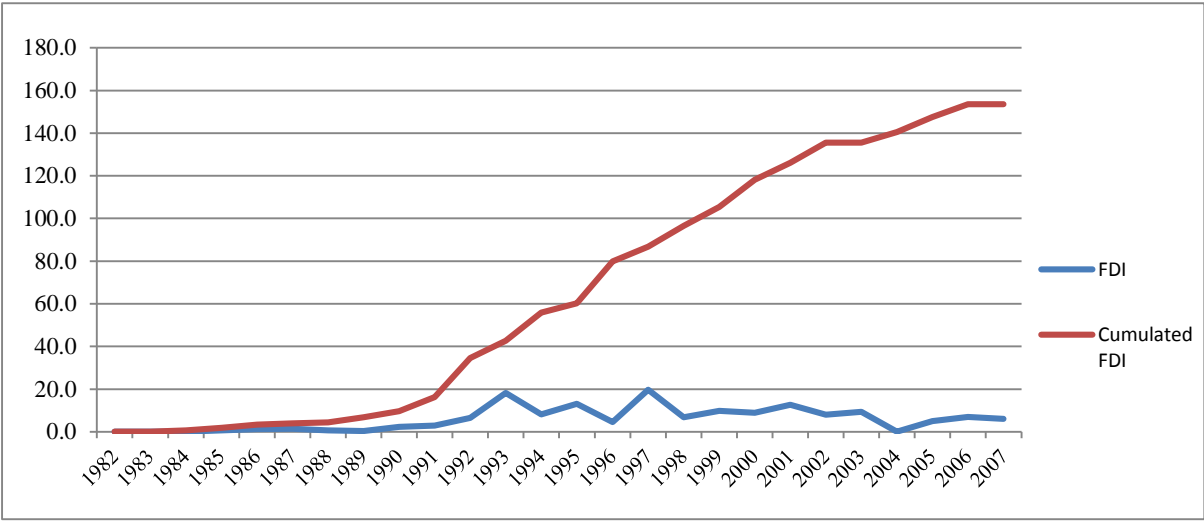


Figure 1 FDI Trend

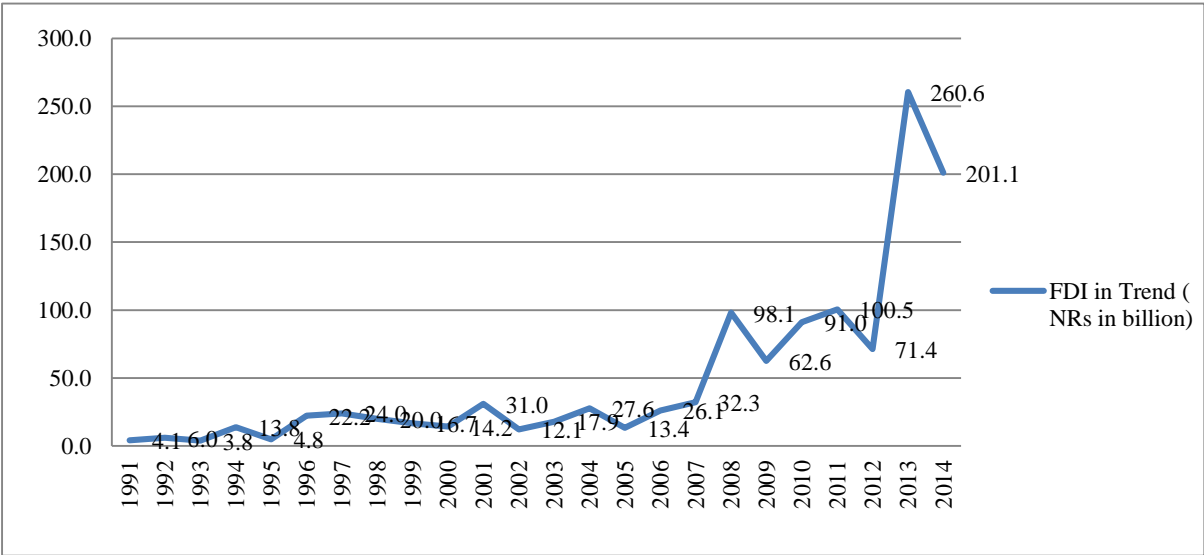


Figure 2 FDI in Trend

The trend of FDI inflow in Nepal from 1982 to 2007, and further to 2014 is unexpectedly reflected in a fluctuating line (Figure 1 and 2). In order to analyze the figures further, it can be divided into economic reform I from 1982 to 1990 and economic reform II from 1990 to 2007 and then 2014. The results from doing that show that FDI inflow in period I is inclining trend but period II is fluctuating in the beginning, and then declining. Economic reform II can further be divided into two time periods (1) normal from 1990 to 1995, and (2) insurgency from 1996 to 2007 (Figure 1). In the normal period, FDI trend is fluctuating, despite having adopted liberalization and privatization policy along with business environment and government commitment. It can be expected during the insurgency period. However, the overall trend of FDI inflow in Nepal indicates something wrong and is quiet reverse with the inflow in South Asia which is an inclining trend line.

FDI structure is an important indicator to understand which types of FDI firms and FDI mother countries are interested in which sectors. This preference of FDI firms is co-integrated with national policy priority and whether this pattern of FDI structure is an optimal condition to Nepal. It can be seen in the structure from mother countries, sector, and manufacturing sector. In FDI mother countries, there is heterogeneity of approximately 37 countries (developed and neighbor countries). Major mother countries include India, China, USA, Japan, France, South Korea, and the UK. Among them, neighbor countries such as India and China, have the most FDI source for Nepal. Then, it is followed by USA, South Korea, Japan, UK, and France (Figure 3). Thus, FDI incidence of India and China is relatively higher in Nepal. How beneficial these countries' FDI is in order to meet national expectation, may be a serious issue.

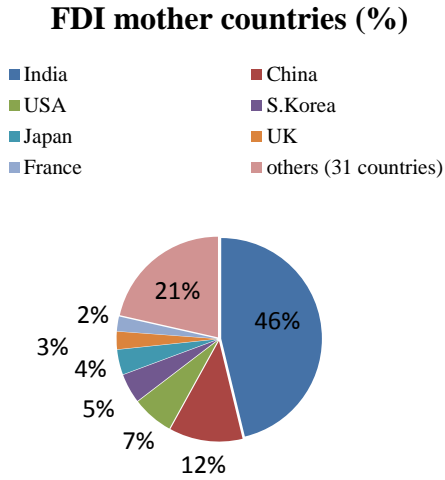


Figure 3 FDI Mother Countries

Nepal has the potential for water resources and tourism, but the largest FDI firms are coming into manufacturing sector and then followed by tourism, service, etc. Except in manufacturing, tourism, and service sector, FDI inflow in construction, electricity, and agriculture is negligible; having only 2% or less than 2% (Figure 4). This sector structure indicates two major attractions which are comparative benefits of Nepalese labor and market access in both India and China under trade treaty preference. Thus, FDI in the sector seems to be market driven as well as profit driven.

FDI in Sectors (%)

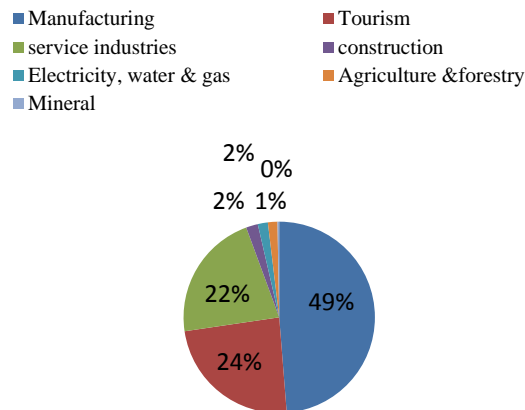


Figure 4 FDI in Sectors (%)

When further classify manufacturing sectors, there are eight major areas (1) textile and Rea garment, (2) chemical and Pl. product, (3) food beverage and tobacco, (4) fabric metal, (5) basic metal product, (6) paper and P. product, (7) non-met MI product, and (8) wood & wood product. FDI incidence is heterogeneous within manufacturing sector in which textile and Rea garment receive the largest share, followed by chemical and Pl. product, food beverage and tobacco, and fabric metal (Figure 5). All these manufacturing sectors are value-added industries which are more domestic centered than export, except for textile and garment. In the case of textile and garment, FDI from India and China come to get US and Germany textile quota trade facility. Therefore, FDI inflow needs the reason to come into Nepal.

FDI in Manufacturing sector(%)

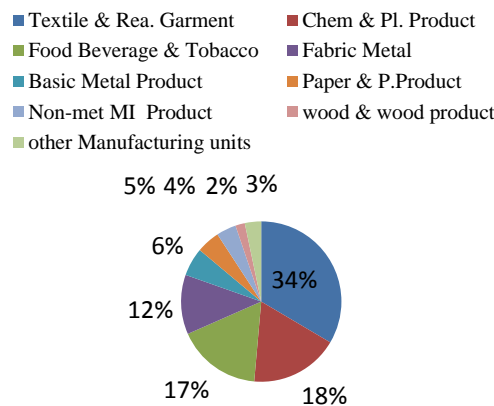


Figure 5 FDI in Manufacturing Sector (%)

METHODS

There are kinds of literature (Ahluwalia, 1991; Pushpangadan & Balakrishnan, 1994; Goldar, 2002; Rao, 1996; and Trivedi, Prakash, and Sinate, 2000) that estimate the total factor productivity of industrial sector at different industrial or firm levels through parametric and non-parametric approach along with econometric models. This research is similar to those kinds of literature in total factor

productivity growth aspect but is different in the aspect of country and character of the industry. This research uses an econometric model based on Cobb Douglas Production Model and a theoretical growth model based on Solow Growth.

This research uses the Econometric Model. Let us suppose there is a functional relationship between GDP, FDI, and Export in economic liberalization policy environment. This relationship can be illustrated by econometric model to estimate whether FDI affects GDP. If GDP is a dependent variable and FDI, Export, GDP ratio, privatization, and liberalization dummies an independent variable. Then, the model is:

$$\text{GDP} = \alpha + \beta_1 \text{FDI} + \beta_2 \text{Export/GDP ratio} + \beta_3 D_1 + \beta_4 D_2 + e \quad (1)$$

The reason why FDI comes in Nepal is a curious issue. This can be examined on the basis of the assumption that passes FDI and policy environment effect on FDI inflow. Let us consider FDI as a dependent variable and FDI (t-1) as well as Dummy (policy environment) as independent variables. Then, its econometric model is:

$$\text{FDI (t)} = \lambda + \delta_1 \text{GDP} + \mu_1 D_1 + \mu_2 D_2 + \mu_3 D_3 + e \quad (2)$$

In addition, it can also be assumed that FDI (t-1), GDP (t-1), policy environment, and security effect on FDI inflow in the country. Let us consider FDI as a dependent variable and FDI (t-1), GDP (t-1), and Dummy (policy environment and security) as independent variables. Then, its econometric model is:

$$\text{FDI (t)} = \lambda + \delta_1 \text{GDP (t-1)} + \delta_2 \text{FDI (t-1)} + \mu_1 D_1 + \mu_2 D_2 + \mu_3 D_3 + e \quad (3)$$

Data sets of FDI, RGDP, and export are used in the research. The secondary sources, World Bank Investment Report and Department of Industry in Nepal are used for data sets of these variables. Data sets from 1982 to 2007 are collected for the research. In order to cross check and get supplementary information, FNCCI and CNI websites are also used. This research follows those studies on the impact of FDI. However, this is different in the aspect of its data sets, methods, and models. This research examines the impact of FDI based on the secondary data using econometric models.

The estimation of FDI coefficients can be seen from the dataset of econometric models includes three variables in which GDP(Y) is a dependent variable and FDI, export, and GDP ratio, as well as dummies (liberalization and privatization), are independent variables. The relationship between GDP, FDI, export, and GDP ratio as well as liberalization and privatization policy is curiosity. In this research, the author focuses on three questions (1) what would FDI contribute to GDP of the country through estimation of the coefficient of FDI? (2) What would export–GDP ratio effect on GDP be? (3) What would liberalization dummy and privatization dummy contribute to GDP of the country?

This research uses time series aggregation database of GDP, FDI, and export GDP ratio from 1982 to 2007. It quantitatively answers the first question from the econometric model after estimations of coefficients of FDI, export-GDP ratio, liberalization, and privatization dummy. From this model, the effects of FDI on GDP can be interpreted through the estimated coefficients of FDI.

The estimation of FDI determinant coefficients can be seen from the dataset of theoretical models includes three variables: FDI (t), FDI (t-1), GDP (t-1), liberalization (dummy), and Insecurity (dummy). This model estimates the determinant of FDI through estimation of coefficients FDI (t-1), GDP (t-1), liberalization (dummy), and Insecurity (dummy). This is done in order to understand the dependency of FDI inflow in Nepal. The focuses of this research are (1) what would be the unknown coefficient of FDI (t-1) to understand how much FDI depends on it? (2) What would be the unknown coefficient of GDP (t-1) to understand how much FDI depends on GDP? (3) What would be the

unknown coefficient of liberalization policy to understand how much liberalization attracts FDI? (4) What would be the unknown coefficient of insecurity? From the econometric model, all of the unknown values can be gathered. Thus, the answer of the FDI determinants in Nepal can be interpreted.

RESULTS AND DISCUSSIONS

Table 1 presents the mean and standard deviations of key variables used in the econometric model. In column 1, there are three key variables such as GDP as a dependent variable as well as FDI and Export-GDP ratio as independent variables. There are also dummy one (liberalization) and dummy two (privatization). Standard deviations of these variables from mean are insignificant so far. Thus, mean of these variables properly represents the time series data of GDP, FDI, and Export-GDP ratio which is collected from the secondary source.

Table 1 Mean and Standard Deviations:
Real GDP, FDI, and Export-GDP Ratio

Variables	1982-2007
Real GDP	2494,024 (269,65)
FDI	5,90 (1,093)
Export-GDP ratio	0,102 (0,011)

Table 2 provides the results of the regression of dependent variable, GDP, on two independent variables, FDI and Export-GDP ratio as well as dummies: D1 (liberalization) and D2 (privatization). There are five parameters; they are α , β_1 , β_2 , β_3 , and β_4 . In the results of regression, parameter α represents constant, β_1 marginal change of FDI, β_2 marginal change of export GDP ratio, β_3 marginal change of D1, and β_4 marginal change of D2.

Table 2 Results of Regressions of Real GDP(Y),
FDI, Export/GDP, D1 (1=Lib), and D2 (1=Priv)

Dependent Variable: Average Real GDP(Y)					
Regressor	1	2	3	4	5
Constant	648,269 (228,76)				
FDI		0,50 (29,06)			
Export/GDP			6604,33 (3113,93)		
D1(1=liberalization, 0=other)				1387,86 (554,22)	
D2(1=privatization, 0=other)					571,87 (450,37)

Table 3 reveals the results of the econometric model in which FDI (t) is dependent, meanwhile FDI (t-1) and GDP (t-1), as well as D1 (Liberalization) and D2 (Insecurity), are independent. There are five unknown parameters: α , β_1 , β_2 , β_3 , and β_4 . In the results of regression, parameter α represents constant, β_1 marginal change of FDI (t-1), β_2 marginal change of GDP (t-1), β_3 marginal change of D1, and β_4 marginal change of D2.

Table 3 Results of Regressions of FDI, Real GDP (t), FDI (t-1) D1 (1=Lib), and D2 (1=Priv), D3 (1=insecurity)

Dependent variable: FDI						
Regressor	1	2	3	4	5	6
Constant	0,17 (1,07)					
GDP(t-1)		0,003(0,094)				
FDI(t-1)			0,5(0,094)			
D1(1=liberalization, 0=other)				8(2,16)		
D2(1=privatization, 0=other)					3,43(2,79)	
D3(1=insecurity, 0=other)						-3,5(1,07)

The result of the econometric model is comprised of two aspects; whether FDI inflow affects GDP of the country, and what determines FDI inflow in Nepal. Regarding the first question, results of the econometric model estimation using unknown five parameters: α , β_1 , β_2 , β_3 , and β_4 ; marginal change of FDI (β_1) is 0,50. Similarly, marginal change of export-GDP ratio (β_3) is 6604,33. It is followed by β_3 and β_4 with 1387,86 and 571,87 respectively. In addition, R2 accumulated a value of 0,88.

Let us suppose there are two scenarios; adopting liberalization and privatization policy and adopting protectionism and state-led development policy. If Nepal continues the state-led development policy, there will be no FDI possibility and no significant export-GDP ratio, and then GDP would be US\$ 648,269 million. However, if Nepal adopts liberalization and privatization policy, there will be FDI and export GDP ratio. If FDI inflow in Nepal is 1, then the GDP will change for US\$ 0,5 million. If the change of export GDP ratio is 1, GDP will increase to US\$ 6604,33 million. In addition, liberalization and privatization policy will contribute US\$ 1387,86 million and US\$ 571,86 million. Taking these into consideration, it can be seen that among those two scenarios, liberalization and privatization policy has the positive impact on FDI, export-GDP ratio, and GDP change. In addition, FDI has a positive relationship with GDP, but the export-GDP ratio has the better position in GDP contribution than FDI. This is explained by the R2 value (0,88).

Regarding the second question, results of the econometric model estimation using unknown five parameters: λ , δ_1 , δ_2 , μ_1 , and μ_2 ; constant (λ) is 0,17. Moreover, marginal change of FDI (t-1) (δ_1) is 0,50. Similarly, marginal change of GDP (t-1) (δ_2) is 0,003. It is followed by μ_1 , μ_2 , and μ_3 with 8; 3,43; and -3,5 respectively. In addition, the R2 value is 0,82.

CONCLUSIONS

FDI inflow determinants consist of many heterogeneous variables. Here, there are four major variables such as FDI stock, GDP, policy environment, and security motivated FDI firms. If there are two scenarios: (1) no policy, no history of FDI and no good economy, but there is good security; (2) good policy environment, history of FDI, and economy, but no good security. In the first scenario, there is US\$ 0,17 million FDI inflow. However, the second scenario has a different circumstance. Under good policy environment and insecurity, let us suppose FDI (t-1) is 1, US\$ 0,50 million will be gathered for FDI inflow, and GDP (t-1) is 1, then US\$ 0,003 million will be acquired for FDI. In addition, liberalization and privatization policy increases 8 and 3,4 times more, but insecurity discourages 3,5 million (\$). FDI inflow (t) depends more on FDI (t-1), policy environment, and security along with economic performance (GDP). It is explained by the R2 value (0,82).

The result of the first question from the first econometric model clearly indicates the positive relationship between GDP and FDI, despite the small size and fluctuating trend. It explains FDI as potential resources which can contribute to GDP through industrial productivity growth. However, it is more likely when FDI inflow can be attracted. On the other hand, the second question from the second econometric model shows the different result. It is that the major determinants of FDI inflow are FDI (t-1), policy environment, and security situation. In order to attract FDI, determinants of FDI should be analyzed and focused on. Furthermore, physical and policy environment which is still poor and under constraint for industrial expansion and trading, should be properly and environmental-friendly improved.

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