Article

Determinants of Inward Foreign Direct Investment: Evidence from Afghanistan

Ahmad Zubair Baha
Nassir Ul Haq Wani

Abstract

This research study investigates the determinants of inward FDI in Afghanistan by taking time series data over the period 2005-2017. The study employed ordinary least square (OLS) method to determine the effect of market size, trade openness, infrastructure, corruption, GDP, inflation and exchange rate (independent variables) on Foreign Direct Investment (dependent variable). The results indicate that market size, trade openness and official exchange rate are the significant and positive determinants of inward FDI inflow in Afghanistan while as, Infrastructure, Corruption, GDP and Inflation are negative determinants of inward FDI. The results of the study recommend that government must improve GDP growth, increase trade openness, build infrastructure and minimize corruption and inflation. Since the result of the study revealed that Infrastructure is not positively related to FDI, infrastructure facilities must be put in place to promote businesses and reduce the cost of doing business in the country. As Inflation is also negative determinant of FDI, the government must maintain monetary policy framework aimed at controlling the rate of inflation. Government must rely on its own capabilities as well as specialized international institutions to achieve a better institutional reform, and learn the best international practices in fighting against corruption.

JEL Classification: F11, F19

Key words: Inward FDI, Afghanistan, GDP

Ahmad Zubair Baha is MBA Alumni, Kardan University.

Dr. Nassir Ul Haq Wani, is Head, Department of Research and Development, Kardan University

Introduction

In recent years, the dynamic of the investment environment has drawn the attention of relationship between foreign direct investment (FDI) and its determinants (Asiedu 2002, Bakar and Sern 2005, Kariuki 2015). Foreign direct investment in general FDI contribute to international trade integration, promote technology spillovers, create a more competitive business environment, assist human capital formation and strengthen enterprise development. Foreign direct investment by help of all these contributions provides a platform for sustainable development of economy and reducing poverty in developing countries (Thaddeus and Yadiri chukwu 2013, Brima 2015).

Large debate has been done by different researchers about the role of determinants of inward FDI to stimulate the growth of an economy. Some researchers believe that foreign direct investment (FDI) inflows are mostly beneficial to developed economies than to developing economies because of exploitation of cheap labor and natural resources. But other researchers believe that inward foreign direct investment (FDI) contributes in technological knowhow and creation of more employment in developing economies. According Athukorala (2009) that determinant of foreign direct investment (FDI) is multidimensional, because multinational corporations making decision of their foreign investment based on different types of motives. For example, some multinational corporations are marketing seeking FDI it means they seek large domestic market and some of them are resource seeking FDI they need natural resources. On the other hand, some multinational corporations are efficiency seeking FDI simply they want to reduce their production cost by relocating their plants and to link to the global market more strongly.

2. **Literature Review**

According OECD (2008) and IMF (2009) foreign direct investment is the category of international investment made by a resident of one country in a firm based in host country with the goal

of building a lasting interest. Protesenko (2004) stated FDI can be distinguished namely: vertically and horizontally. In Vertical FDI the enterprise separate production by outsourcing some production stage. This is because it is more profitable for firm, and horizontally one is where enterprise duplicates its activities in other countries where the separated firm produces goods and services generally the same to those it produces at the home. The reason may be that of circumventing trade barriers. Foreign direct investment (FDI) makes able the investor gains significant influence in the management of an entity outside the investor's home country so, it is considered as essential in international investment (Solmon, 2011). Empirical evidence shows that there is less volatile than other capital flows (e.g., IMF, World Economic Outlook (2007), foreign direct investment FDI somehow better for development and growth. While empirical evidence supports mix of FDI for better growth, there is evidence that in certain country FDI as prerequisites does in fact lead to better growth outcomes (Alfaro, 2003, Gregorio and Lee, 1995). The mentioned qualities of foreign direct investment FDI created substantial interest among policymakers on the factors that might attract FDI flows. Different studies like Sahoo (2006), Kamal et al. (2014) and Ahmad et al (2015) revealed that well-developed infrastructure facilities attract more foreign investment, thus has positive effect on inward FDI. According Hausman and Fernandes-Arias (2003) domestic saving are too low in developing countries to even support the finance sufficient capital building. Foreign direct investment acts as a tool to reduce the financing constraints. Due to capital flow from one economy to another economy FDI bring higher return and it diversify the risks. The movement of international capital has potential impact through FDI that will lead in an increase in world output and welfare. Based on studies of Artige and Nicolini (2005), there is a strong correlation between the size of the market of host country and foreign direct investment (FDI) inflow. Large market size creates greater opportunities and it leads to economies of scale and results in greater business activities (Zhang, 2000). There is positive

relationship between market size and large population. More opportunities for sales and more profit to the foreign investor will be created by large market size, therefore large market size attracts FDI inwards (Wang and Swain, 1995).

Trade openness is one of the significant determinants of inward FDI. Trade openness represents the ability of a country to trade with other countries. Generally, export-oriented country is influenced positively by trade openness; this shows the country has the ability to conduct the trade (Gastanaga et al. 1998 and Asiedu, 2000). If the host country can't improve the trade openness, the host country is not a favorable destination for FDI because trade cannot go any further. Greater trade openness makes able the host country outperforms its economy relatively as compare of less opened country or country with low trade openness. Openness to trade creates a comparative advantage for the host country which is favorable for foreign investor to undertake inward FDI Williamson (1975). Roads, electricity, railways, ports, telecommunication systems, water supplies, institutional development such as legal services, accounting firms, etc. all considered as infrastructure. According to Marr (1997), for FDI firms, poor infrastructure is considered both an obstacle and a chance for foreign investor. For majority, low income countries, it is seen as one the major obstacle. But it acts as an opportunity if the host government allows foreign investor in participation of infrastructure sector. In this study the proxy for Infrastructure is measured by the number of telephone lines per 1,000 inhabitants (Asiedu, 2002).

Regarding corruption variable, there is no general agreement on a specific proxy in representing corruption; different researchers have used different proxies for measuring corruption. Quazi (2014) in a study, the impact of corruption on FDI in 15 countries (East Asia and South Asia) used the Corruption Perceptions Index (CPI) as a measurement of corruption and found negative impact of corruption on FDI inflows. GDP and its growth rate are considered as good

indicator of economic situation and economic development in the country. Higher growth rate shows favorable macro-economic indicators like higher level of consumption, employment, investment and saving. Therefore, high level GDP growth is highly promising and it encourages both domestic and foreign investment (Shamsuddin, 1994; Resmini, 2001; Zhao, 2003; Janicki & Wunnava, 2004; Mateev, 2008 and Vijaya kumar et al., 2010).

Another variable considered in the study is Inflation. When the inflation rate is high, foreign investors need more money, time and efforts as the higher rate is less favorable for investor to adapt to the increasing price level (Lo et al. 2013, 41) market-seeking FDI firms are discouraged when there is unpredictable and volatile inflation rate because, it creates uncertainty in setting the price and profitability of the firms. (Kamal et al. 2014,) high rate of inflation impact on local currency devaluation, and it diminishes the real return on investment. Consequently, the FDI flows will stimulated by low and predictable inflation rate and vice versa. Mukhtar et al. 2014 argues, they are different ways, that exchange rate can impact on the inward FDI in economy. When exchange rate appreciated in terms of host country currency as compared with home country currency. It means the devaluation of host country currency. In this case the purchasing power of the foreign investors in host country is enhanced. Therefore it encourage FDI firms to invest in host country's assets. Culem (1998) argues that low exchange rate impact relative labor cost and it allows foreign investors to hire more labor for a certain amount of home currency. Consequently, there is a significant increase of FDI flows into the host country.

3. Research Methodology

The data were collected for different variables such as market size, trade openness, infrastructure, corruption, inflation, GDP and official exchange rate from World Bank ranging from 2005 to 2017. This research paper applied multiple regression through ordinary least square (OLS), a statistic method examining the relations of

dependencies among dependent variable and independent variables. OLS method is one of the most basic and most commonly used predication techniques among researchers.

a. Model Specification

For the determination of relationship between dependent and independent variables, for this study multiple regression analysis is used for used variables. The econometric model is presented as follow:

$$\text{Ln (FDIt)} = \beta_0 + \beta_1 \text{Ln(MZt)} + \beta_2 \text{Ln(TOt)} + \beta_3 \text{Ln(IFSt)} + \beta_4 \text{Ln(CRt)} + \beta_5 \text{Ln(GDPt)} + \beta_6 \text{Ln(INFt)} + \beta_6 \text{Ln(OER)} + \mu t \quad (1)$$

Where $\beta_1, \beta_2, \dots \beta_6$ are coefficients of elasticities; Ln represents the natural logarithm of variables; and μ is the error term.

Where MZ represents market size, TO represents Trade Openness INFS represents Infrastructure CR represents Corruption GDP represents Gross Domestic Product INF represents Inflation OER represents Official Exchange Rate.

b. Multiple Regression Analysis

Result after running the data in SPSS (Version 24.0) software by using multiple regression analysis, the output is presented in Tables as given below.

Table 1: Model Summary

Model	R	R square	Adjusted R Square	Std. Error of the Estimate
1	.941[a]	.886	.727	43654086.44533

Source: Data output from SPSS.

Multiple regressions model is important to identify the model fitness. The model fitness can be checked by R and R Square. In this study, it has been found that the R value is 94.1 % where R square is 88.6%. it means that 88.6% variation is explained by independent variables includes of official exchange rate, trade openness, inflation, market size, GDP, corruption and infrastructure in dependent variable (Foreign Direct Investment), which shows significant relationship between variables. The remaining percentage 11.4% of the change in

the Foreign Direct Investment is being explained by those variables which have been not selected in this study.

Table 2: ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	74298686979	7	106140981399	5.570	.038[b]
Residual	95283963168	5	190567926337		
Total	838270832966	12			

Source: Data output from SPSS.

From the above table 2, in ANOVA table, the result show its significant level less than 0.05, indicating that the model is statistically significant stating that all variables affect inward FDI in Afghanistan, the value of F calculated here shows higher level than F critical possessing that model is significance.

Table 3: Coefficient[a]

Model	Unstandardized		Std.Coef	t	Sig.	Tol	VIF
	B	Std. Error	Beta				
constant	-7011.48	33660.69		-.20	.84		
MZ	502.38	362.59	.85	1.38	.22	.06	16.79
TO	7954.18	6405.25	.235	1.24	.26	.63	1.58
INF	-9549.89	3779.85	-2.33	-2.52	.05	.02	37.70
CR	-37955.17	10892.60	-.10	-.34	.74	.25	3.91
GDP	-4559.44	3460.33	-.32	-1.31	.24	.37	2.70
IF	-4303.37	1970.81	-.45	-2.18	.08	.51	1.92
OER	8319.06	5046.37	.73	1.64	.16	.11	8.71

Source: Data output from SPSS.
Note: Std.Coef represents Standard Coefficients and Tol represents Tolerance.

Finding reveals that if there is a unit increase in Market Size, for value of 0.858 then there is increase in inward FDI, a unit increase in Trade Openness, for value of 0.235 then there is increase in inward FDI, a unit increase in Official Exchange Rate, for value of 0.734, however one unit raise in infrastructure inward FDI will decline by -2.339 units, one unit increase in corruption inward FDI will decrease by -.104, one unit increase in GDP inward FDI will decline by -.326 and one unit increase in inflation inward FDI will decrease by -0.457. the model shows that three of variables, Market Size, Trade Openness and Official Exchange Rate have showed positive impact on inward

FDI in Afghanistan while Infrastructure, Corruption, GDP and infrastructure have negative impact on inward FDI in Afghanistan.

4. Conclusion and Recommendation

The main aim of this study is to analyze the determinants of FDI in Afghanistan by using market size, trade openness, infrastructure, corruption, GDP, inflation and official exchange rate as determining variables using time series data from 2005-2017. The empirical results reveal that GDP per capita as proxy for market size, exchange rate and trade openness encourage FDI inflows in Afghanistan while telephone lines as proxy for infrastructure, corruption, GDP and inflation tend to deter inward FDI in Afghanistan.

The empirical findings have several important policy implications. First, GDP per capita of Afghanistan has significant positive impact on inward foreign direct investment, so it is for government to paved the ground for more sustainable growth of the country's GDP. Consequently, this will strengthen the attractiveness of Afghanistan's economy for more inward FDI. As the openness to trade in Afghanistan is also a positive determinant, government should develop more reform agenda and make further efforts to enhance the implementation of its reform agenda, which has the potential to attract more FDI inflows. Since the inflation rate has negative relationship with FDI inflows, which indicates a sign of weak macroeconomic performance, both foreign and domestic investors may not be willing to invest in a market with high inflation rate. Thus, the government of Afghanistan should maintain policies aimed at controlling the rate of inflation. This requires a monetary policy framework which focuses on inflation as a target variable. As the result of the study indicates that inward FDI and infrastructure is negatively related. Infrastructure facilities must be put in place to promote businesses and reduce the cost of doing business in the country.

In addition, to ensure the attraction of more inward FDI in Afghanistan, official authorities must rely on its own capabilities as

well as specialized international institutions to minimize corruption, and learn the best international practices in fighting corruption. With regard to the scope for further studies, it is recommended for future studies to examine other potential determinants that are likely to affect the inward FDI in Afghanistan. such as natural resources, political regime, government expenditure, budget deficit, money supply, taxes and tariff, regulations and rule of law. Infrastructure can also be investigated as a different proxy with available data, e.g. water supplies, electricity, road which might lead to more reliable results. Additionally, it would be interesting to implement wider analysis for groups of countries, including Afghanistan to identify the determinants of FDI inflows.

References

Asiedu, E. (2002). On the Determinants of Foreign Direct Investment to Developing Countries: Is Africa Different? *World Development*, 107-119.

Athukorala, P.-C. (2009). Trends and Patters of Foreign Direct Investment in Asia: A Comparative Perspective. *Margin-The Journal of Applied Economic Research. Vol. 3*, 365-408.

Bakar, A. A. (2005). A Re-Evaluation of the Determinants of FDI in Malaysia. *Malaysian Management Journal 9, no. 1&2 (2005)*, 13-23.

Borensztein, Eduardo, & José de Gregorio and Jong-Wha Lee. (1995). How Does Foreign Direct Investment Affect Economic Growth?" NBER Working Paper No. 5057.

Brima, & Sesay. (2015). Macroeconomic Determinants of Foreign Direct Investment in Sierra Leone: An Empirical Analysis. *International Journal of Economics and Finance 7, no. 3 (2015)*, 123-133.

Daniels, J. D., Radebaugh, L. H., & Sullivan, D. P. (2002). Globalization and Business. *Prentice Hall, Upper Saddle River, New Jersey*.

Dunning, J. H. (1993). Multinational enterprises and the global economy. *Addison-Wesley, Great Britain.*

Gastanga, V., Jeffrey, B., & Pashamova, B. (1998). Host country reforms and FDI inflows: How much difference do they make. *World Development, 26(7),* 1299-1314.

Janicki, H. P., & Wunnava, P. V. (2004). Determinants of foreign direct investment: empirical evidence from EU accession candidates. *Applied Economics, 36,* 505-509.

Kamal, A., Muhammad, Zhaohua Li, Ghulam Akhmat, Malik F, Bashir , & Khalid Khan. (2014). What Determines China's FDI Inflow to South Asia. *Mediterranean Journal of Social Sciences 5, no. 23 (2014),* 254-263.

Kariuki, & Caroline. (2015). The Determinants of Foreign Direct Investment in the African Union. *Journal of Economics, Business and Management 3, no. 3 (2015),* 346-351.

Mateev, M. (2008). *Determinants of Foreign Direct Investment in Central and South-eastern Europe: New Empirical Tests, paper resented in the 8th Global Conference on Business and Economics.* Retrieved from www.gcbe.us/ 8th_GCBE/data/Miroslav%20Mateev.doc

Moosa, L. (n.d.). (2002). Foreign Direct Investment: Theory, Evidence and Practice. *Palgrave Macmillan, Great Britain.*

Nunnenkamp, P. (2002). *Determinants of FDI in Developing Countries: Has Globalization Changed the Rules of the Game? Kiel Working Paper No. 1122.* Retrieved from http://www.kms1.isn.ethz.ch/serviceengine/Files/ISN/103170/.. ./ en/kap1122.pdf

Resmini, L. (2001). The determinants of foreign direct investment into the CEECs: new evidence from sectoral patterns. *Economics of Transition, 8,* 665-689.

Sahoo, P. (2996). Foreign Direct Investment in South Asia: Policy, Trends, Impact and Determinants, Discussion Paper, Tokyo: Asian Development Bank Institute. 56.

Shamsuddin, A., & F, M. (1994). Economic Determinants of Foreign Direct Investment in Less Developed Countries. *The Pakistan Development Review, 33(1)*, 41-51.

Thaddeus, O., Ebiringa , & Emeh Yadirichukwu. (2013). Determinants of Foreign Direct Investment Inflow: A Focus on Nigeria. *European Journal of Business and Management 5, no. 24 (2013)*, 41-52.

Vijayakumar, N., Sridharan, P., & Rao, K. C. (2010). Determinants of FDI in BRICS Countries: A panel analysis. *Int. Journal of Business Science and Applied Management, 5(3)*, 1-13.

Wang, Z., & Swain, N. (1993). The determinants of foreign direct investment in transforming economies: Empirical evidence from Hungary and China. *Weltwirtshaftiches, 12(9)*, 359-381.

Williamson, O. E. (1975). Markets and hierarchies: Analysis and antitrust implications. *New York: The Free Press.*

Zhang, K. H. (2000). How does foreign direct investment affect economic growth? *Economics of Transition, 9(3)*, 679-682.

Zhao, H. (2003). Country factor differentials as determinants of FDI flow to China. *Thunderbird International Business Review, 45(2)*, 149-169.