Author: SALMAN VIRANI

Determinants of Foreign Direct Investment – Empirical Evidence from Pakistan

Abstract

My efforts here in this paper are to understand whether purchasing power and trade openness are key determinants of foreign direct investment in Pakistan or not. There has been a lot of research in this area for numerous regions, but for some reasons there is a lack of research when we talk about Pakistan. Multiple Linear Regression has been used here and the main source of data is World Bank. The explanatory variables used are domestic credit to private sector (% of GDP), merchandise imports, merchandise exports, and inflation.

Introduction

The World Bank, the source of majority of my data, describes FDI as "Foreign direct investment refers to direct investment equity flows in the reporting economy. It is the sum of equity capital, reinvestment of earnings, and other capital. Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. Ownership of 10 percent or more of the ordinary shares of voting stock is the criterion for determining the existence of a direct investment relationship."

What factors boost foreign direct investments in a country is a matter of great interest to a lot of economic scholars. There is no doubt about the fact that there are numerous benefits of FDI in a host country. These include but not limited to economic development, employment creation, and development of human capital resources. It is a well-established belief that the benefits of FDI absolutely outweighs its disadvantages for the host country. The Eclectic Theory of Dunning (1981) classify the motivations of an investor, in investing abroad into three main categories. These are, ownership, internalization and location. The size and the productivity of the firm determines if a firm will invest abroad. Companies with low productivity mostly produce for the home market. Medium sized companies with medium-productivity levels produce for the home markets but along with that they are also involved in exporting to other countries. Finally, the most productive firms can be seen investing abroad via FDI's. Numerous reasons motivate a firm to operate in a foreign country. In the 1970's, FDI was studied through the perspective of Hecksher-Ohlin which regarded FDI as an international movement of physical capital in search of higher returns. So, as in the third category of Dunning (1981), FDI's are attracted to locations of higher profit potential for the investors.

UNCTAD's 2020 World Investment Report states that FDI inflows to Pakistan rose from USD 1.7 billion in 2018 to USD 2.2 billion in 2019. A major boost in FDI is attributed to Chinese investment and the development of China Pakistan Economic Corridor. Pakistan ranks below India in potential attractiveness to investment. However, Pakistan is improving slowly with better security conditions and lesser electricity shortages. Pakistan has a huge market with population of roughly 207 million, and a very strong middle class. In the recent past, government of Pakistan has adopted FDI friendly policies giving equal treatment to both foreign and local investors along with numerous tax incentives. However, there are still some hurdles for foreign investors when planning to invest in Pakistan. Firstly, the security environment has considerably improved in the recent past but still there is a lot work to be done. Pakistan's unfriendly relations with its neighbors, Afghanistan and India, also creates problems for foreign investments. Secondly, high level of corruption create problems for foreign investors. At the moment the business environment in Pakistan is a bit difficult as Pakistan ranks 147^{th} in the World Bank report on pro-business economies. But the recent economic liberalization policies of the government gives us hope for better investment environment in the country.

We will try to look into the factors that affected FDI net inflows in Pakistan from 1970-2019 through a macroeconomic perspective. The choice of the time period for analyses was influenced by the availability of consistent and reliable data. I have tried to build a relation between FDI net inflows and some factors in my research and investigate the strength and direction of such relation. Our explanatory variables for this research paper will be Domestic credit to private sector (% of GDP), Merchandise Imports, Merchandise Exports and Inflation.

Data and Methodology

The list of variables used for regression are stated in the table below. These variables are defined as of World Bank website.

FDI net inflows	Foreign direct investment refers to direct investment equity flows in the reporting economy. It is the sum of equity capital, reinvestment of earnings, and other capital. Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. Ownership of 10 percent or more of the ordinary shares of voting stock is the criterion for determining the existence of a direct investment relationship.
Merchandise Imports	Merchandise imports show the c.i.f. value of goods received from the rest of the world.
Merchandise Exports	Merchandise exports show the f.o.b. value of goods provided to the rest of the world.
Domestic credit to private sector (% of GDP)	Domestic credit to private sector refers to financial resources provided to the private sector by financial corporations, such as through loans, purchases of nonequity securities, and trade credits and other accounts receivable, that establish a claim for repayment. For some countries these claims include credit to public enterprises. The financial corporations include monetary authorities and deposit money banks, as well as other financial corporations where data are available (including corporations that do not accept transferable deposits but do incur such liabilities as time and savings deposits). Examples of other financial corporations are finance and leasing companies, money lenders, insurance corporations, pension funds, and foreign exchange companies.
Inflation, consumer prices (annual %)	Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly.

There were some variables that I wished to enter in the regression but due to not enough data availability, those variables were excluded. For interest rates and corporate income tax rates, data for only the last 8 years (n=8) is available in case of Pakistan. Merchandise imports and merchandise exports gives us a picture of the level of trade openness. As in numerous literature on foreign direct investments, trade openness has been deemed as an important factor and thus was added in this regression. Importantly, merchandise imports also gives a picture of the market size in a sense that it portrays the purchasing power of the economy. Domestic credit to private sector (% of GDP) represents the financial sector of the economy and ease of getting credit. Inflation variable accounts for general level of price of goods and services.

So in our regression we have included explanatory variables that accounts for market size, financial sector and inflation rate of the economy, which is the economy of Pakistan in our case.

Kindly refer to the R Markdown HTML output provided for the descriptive statistics, plots and regression model.

Some comments on the relation between FDI and Economic Growth and Conclusion

FDI inflows bring numerous opportunities for the economic growth and development in the host country. There is an enormous literature on the relation between FDI and economic growth. One such paper I went through during my research was from Qiang (2009) titled as 'The Relationship Between Foreign Direct Investment and Economic Growth in Togo'. The study was based on Togo's data from 1991-2009. Through the use of Granger-causality test, the study concluded that there exists a one-way relation between FDI and GDP, in which FDI explained the variance in GDP but not the other was round (FDI caused GDP but GDP did not cause FDI). Like this research there is numerous work on this topic concluding a positive and significant impact of FDI on economic growth.

References:

Wheeler, D., & Mody, A. (2002, April 22). International investment location decisions: The case of U.S. firms.

Wang, Z., & Swain, N. (1998, December 04). Determinants of Inflow of Foreign Direct Investment in Hungary and China: Time-Series Approach.

Nezakati et al (2011) The determinants of FDI inflow in manufacturing sector of Malaysia.

Chakrabarti, A. (2003, November 06). The Determinants of Foreign Direct Investments: Sensitivity Analyses of Cross-Country Regressions.

Bayar, Y., & Gavriletea, M. (2018, January 01). Foreign Direct Investment Inflows and Financial Development in Central and Eastern European Union Countries: A Panel Cointegration and Causality.

Holland, D., & Pain, N. (1998, January). The determinants and impact of foreign direct investment in the transition economies: a panel data analysis

Balasubramanyam, V., Salisu, M., & Sapsford, D. (1996). Foreign Direct Investment and Growth in EP and is Countries. *The Economic Journal, 106*(434), 92-105.

Singh, H., & Jun, K. (1995, November 30). Some new evidence on determinants of foreign direct investment in developing countries.

Cassou, S. (1997, January 01). The link between tax rates and foreign direct investment.

Morrissey, O., & Udomkerdmongkol, M. (2013, February 05). Foreign Direct Investment and Exchange Rates: A Case Study of US FDI in Emerging Market Countries.

Gauselmann (2011) What drives FDI in Central–Eastern Europe? Evidence from the IWH-FDI-Micro database.

Janicki, H., & Wunnava, P. (1970, January 01). Determinants of foreign direct investment: Empirical evidence from EU accession candidates.

Galego, A., Vieira, C., & Vieira, I. (1970, January 01). The CEEC as FDI Attractors: A Menace to the EU Periphery?

Plikynas & Yusaf H. Akbar. (1970, January 01). Neural Network Approaches to Estimating FDI Flows: Evidence from Central and Eastern Europe.

Mundell, R. (1957). International Trade and Factor Mobility. *The American Economic Review*, *47*(3), 321-335.

Qiang, F. (2009). The Relationship Between Foreign Direct Investment and Economic Growth in Togo. Proceedings of the 8th International Conference on Innovation & Management.