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Foreign Direct Investment's Role in Bolivian Economy

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Abstract: In the context of globalization, one country's economic growth is affected by the internationally traded goods and services and cross-border investments. It is known that in countries, especially the developing countries, foreign direct investment (FDI) plays a very transcendent role in realizing economic expansion and fostering development by supplying capital in need. This paper examined whether Bolivia´s economy is in conformity with the expectation for FDI by using time-series data from 1990 to 2018. The multiple regression analysis reflects a positive relationship, which is statistically significant, between foreign direct investment, economic size, and total exports in Bolivia. The Granger causuality test supports FDI's effect on exports but does not find causuality for GDP. Therefore, we propose a long-term policy support for FDI to drive future Bolivian economic growth as well as its export expansion.

Keywords: foreign direct investment, economic growth, Bolivia

1. Introduction

In Bolivia, foreign investment has shown considerable growth. This increase is mainly the result of national macroeconomic stability and public policies oriented to generate spaces to attract greater foreign investment. On the other hand, the increase in the prices of raw materials and aspects of external imbalances - low international interest rates, lower dynamism in advanced economies (sometimes with negative growth) - made international investors shift to investing in emerging economies such as Bolivia.

In the current tendency of globalization, the economic growth of a country will be affected by the various activities undertaken by cross-border investment. In all nations, particularly those that are developing, FDI plays an indispensable role in driving local economic growth. This paper tries to contribute to clarifying the possible national channels that foreign investment flows could take to favor growth in the Bolivian context since Bolivia has a small economy, is developing, and has exchange restrictions.

The remaining parts of the paper include an analysis of FDI's role in the Bolivian economy in Section 2, which consists of a literature review, an overview of the economy of Bolivia and FDI, regression analysis, and policy suggestions. Section 3 is the conclusion.

2. Analysis of FDI's Role in Bolivian Economy

We will first review related studies about FDI and then conduct an empirical study of FDI's role in the Bolivian economy using a regression model.

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2.1. Literature Review

Many scholars have done extensive research in the field of FDI. The first issue of concern is the variables that are significantly affecting the inflow of FDI into a country. These studies have reported variables like market size (Jadhav, 2012) [1], infrastructure and openness (Singh et al., 2008) [2], human capital, and political environment quality (Maeyen, 2011) [3].

The second issue of interest is the causal relationship between FDI and other economic variables. Some research (Borensztein et al., 1998 [4]; Vu et al., 2006 [5]) indicated a complementary relationship between FDI and human resources. There are many more studies that have reported a significant impact of FDI on economic growth (such as Khaliq and Noy, 2007 [6]; Koff et al., 2016 [7]; Hong, 2013 [8]). But there is also research that suspects such an opinion (Choe, 2003) [9].

Considering the diversified condition, such as resource endowment, of different countries and the different levels of development, the role of FDI for a certain country is expected to be a dynamic one and may not be identical across the globe. Therefore, more empirical studies using country-specific data in this field are necessary before a generic conclusion can be drawn.

2.2. Bolivan Economy and FDI

Bolivia is a landlocked nation situated in the western-central region of South America. The capital is Sucre, while the government and financial center are in La Paz. Santa Cruz de la Sierra is the biggest city and key industrial center, located in the eastern territory. Bolivia is surrounded by Brazil, Paraguay, Argentina, Chile, and Peru. During 2018, the Bolivian economy continued to show growth despite a fragile world economic situation and the deterioration of global and regional prospects. Consequently, a GDP growth of 4.2% was registered, which was slightly above that registered in 2017. This was the outcome of the positive performance of domestic demand, the progress of the industrialization policy, and other measures to promote sector development launched by the government.

On April 4, 2014, Law No. 516 on Investment Promotion was enacted, with the aim of establishing the general legal and institutional framework for the attraction of investments into Bolivia in order to speed up economic growth and upgrade social development in the country. According to the Central Bank of Bolivia's net direct investment liabilities, the gross direct investment received in 2018 totaled US$ 781 million, which was lower than the amount registered in 2017. These resources were destined for the hydrocarbons (US$ 282 million), mining (US$ 123 million), and commerce (US$114 million) sectors, mainly. Gross direct investment flows mainly came from Sweden (mostly destined to the mining and manufacturing industries), Spain (largely destined to the hydrocarbons sector), and Peru (destined to the manufacturing and financial intermediation sectors).

2.3. Regression Analysis

We use two multiple regression models to calculate the impact of FDI on GDP and the real exports of Bolivia:

$$GDP = \alpha_0 + \beta_1 \cdot FDI + \beta_2 \cdot LF + \beta_3 \cdot GX + \varepsilon_0 \tag{1}$$

In model (1), the dependent variable is the annual gross domestic product (GDP) and independent variables include foreign direct investment (FDI), labor force (LF), and government expenditure (GX).

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$$XP = \alpha_1 + \beta_4 \cdot FDI + \beta_5 \cdot LF + \beta_6 \cdot GX + \varepsilon_1 \quad (2)$$

In model (2), the dependent variable is the annual real exports (XP), and the independent variables are FDI, LF, and GX. The time period of variables is from 1990–2018, and data were collected from the World Bank, the Central Bank of Bolivia, and the Economic Commission for Latin America, as shown in Table 1.

Table 1: Variables Description and Data Source.

Variables	Data Source	Website
GDP= Bolivia´s GDP *XP*= Bolivia´s Real Export *FDI*= Foreign Direct Investment *LF*= Labor Force *GX*=Government expenditure	World Bank Central Bank of Bolivia Economic Commission for Latin America	https://www.worldbank.org https://www.bcb.gob.bo/ https://www.cepal.org/en

The regression results using ordinary least square (OLS) method are presented in models (1) and (2) in Table 2. The coefficient of FDI is positive and significant at the 1% level in explaining GDP and exports. Both labor force and government expenditure are positive and significant at the 1% level as well. R square is greater than 0.8. For models (3) and (4), inflation rate (IR) and exchange rate (ER) are added to further examine the regression robustness. The significant situation of coefficient of FDI is unchanged for explaining GDP and exports. However, government expenditure and exchange rate are not significant enough to explain real exports.

Table 2: OLS Regression Results.

Variables	GDP (1)	XP (2)	GDP (3)	XP (4)
FDI	0.419 (2.992)***	2.033 (2.299)***	0.529 (3.676)***	2.278 (2.961)***
LF	3389.117 (22.965)***	2509.974 (2.697)***	2917.173 (7.506)***	6055.983 (2.915)***
GX	1.723 (28.852)***	0.874 (2.320)***	1.856 (16.641)***	0.032 (0.054)
IR			32174854 (2.048)*	1.99E+08 (2.366)**
ER			2.00E+08 (1.576)	-8.08E+08 (-1.191)
R^2	0.997	0.842	0.998	0.904
Adjusted-R^2	0.997	0.823	0.997	0.884

Note: t-Statistic in bracket. ***, **, * denote 1%, 5% and 10% significant level respectively.

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Table 3: Pair-wise Granger Causality Test Results.

Null Hypothesis	Probability
GDP does not Granger Cause FDI FDI does not Granger Cause GDP	0.995 0.830
XP does not Granger Cause FDI FDI does not Granger Cause XP	0.516 0.038**
GDP does not Granger Cause LF LF does not Granger Cause GDP	0.241 0.058*
GDP does not Granger Cause XP XP does not Granger Cause GDP	0.395 0.095*

Note: **, * denote 5% and 10% significant level respectively.

To examine the casual relationship between variables, we conducted a pair-wise Granger causality test and the results are shown in Table 3. As seen from the result, FDI and GDP do not Granger cause each other. FDI Granger causes exports (XP) at the 5% significance level. Labor force (LF) and exports (XP) Granger cause GDP at the 10% significance level. We estimate that FDI is more closely related to export-oriented investment purposes. The Bolivian economy is still dependent on labor-intensive industries. FDI, due to its limited size, is still not a decisive driving force for Bolivia's overall economy. However, FDI is a working factor for GDP by contributing to the growth of exports.

2.4. Policy Suggestion

Based on the empirical analysis of the role of FDI, our suggestion for the government is to continue to strengthen the incentive policy towards foreign investment and investors. For developing countries like Bolivia, a lack of capital for upgrading industrial structures is a challenge for its sustainable growth. By attracting FDI to take advantage of the country's resources, exports can be expanded at a faster pace, which will contribute to the scaling up of the economy. Long-term policy for FDI shall be implemented as time is needed to accumulate the economic effect.

3. Conclusion

International capital flows in the form of foreign direct investment are the central topic of this research. Especially for developing countries, FDI plays a very transcendent role as the driver of economic growth and development. This work examined the relationship between FDI and Bolivia´s growth. By using time-series data from 1990 to 2018 to analyze the relationship between FDI and the economy in Bolivia, the regression analysis confirmed the positive impact of FDI on Bolivian GDP and total exports. Also, FDI is a Granger cause of exports. Hence, a supportive and long-term policy is proposed to attract foreign investment and investors.

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References

[1] *Pravin Jadhav (2012), Determinants of foreign direct investment in BRICS economies: Analysis of economic, institutional and political factor; International Conference on Emerging Economies - Prospects and Challenges (ICEE), pp. 5 – 14.*

[2] *D. Ramjee Singh, Hilton McDavid, A. Birch & Allan Wright (2008), The Determinants Of FDI In Small Developing Nation States: An Exploratory Study; Social and Economic Studies 57: 3&4, pp. 79-104.*

DOI: 10.54254/2754-1169/68/20241351

[3] *Solomon Edna Maeyen (2011), Foreign Direct Investment, Host Country Factors and Economic Growth, Ensayos Revista de Economía–Volumen XXX, No. 1, mayo 2011, pp. 41-70.*

[4] *E. Borensztein, J. De Gregorio, J-W. Lee (1998), How does foreign direct investment affect economic growth?, Journal of International Economics 45, pp. 115–135.*

[5] *Tam Bang Vu, Byron Gangnes, Ilan Noy (2008); Is Foreign Direct Investment Good for Growth? Evidence from Sectoral Analysis of China and Vietnam, pp. 20-34.*

[6] *Abdul Khaliq and Ilan Noy (2007), Foreign Direct Investment and Economic Growth: Empirical Evidence from Sectoral Data in Indonesia, pp. 3 -7.*

[7] *Dumor Koff, Zonon Ifred Baba Tounde Paterne, Gbongli Komlan (2016); Impact of the Foreign Direct Investment on Economic Growth in Benin: A Cointegration Analysis; Journal of Economics and Sustainable Development, Vol.7, No.1, pp. 78 – 92.*

[8] *Liming Hong (2013), Does and How does FDI Promote the Economic Growth? Evidence from Dynamic Panel Data of Prefecture City in China, 2013 International Conference on Future Software Engineering and Multimedia Engineering, pp. 57 – 62.*

[9] *J. Il Choe (2003), Do Foreign Direct Investment and Gross Domestic Investment Promote Economic Growth? Review of Development Economics, 7(1), pp. 44–57.*