The effect of foreign direct investment on Afghanistan's GDP growth from 2002 to 2019

Sebghatullah Temori

Abstract
Foreign direct investment (FDI) as one of the major elements of economic growth in developing countries has been of great importance in such economies, which most of these countries are trying to attract and lay the groundwork for it. The purpose of this study is to investigate the effect of foreign direct investment on GDP growth in Afghanistan. Secondary data is considered for 18 years from 2002 to 2019, the data has been collected through documentary methods, and analyzed as quantitative method by using ordinary least square (OLS) model. The results show that there is a positive relationship between foreign direct investment and increasing the level of gross domestic products (GDP), and explains that 1% change in FDI causes a 17% change in the level of GDP, and finally the alternative hypothesis is confirmed at 0.1 significant level.

Keywords: FDI, GDP, investment

Introduction
Economic growth and ways to achieve higher rates is one of the important priorities that economists and government officials pay special attention to in their planning, on the other hand, foreign direct investment and freedom of trade play an important role. Fulfills this desire. Economic growth is considered a macroeconomic goal that policymakers use various economic tools to accelerate it. According to various theories, capital is the main driver of economic growth and national savings are the main source of this capital. Today, many countries in the world have a strong desire to attract foreign investment due to insufficient domestic resources for investment. Studies show that foreign direct investment, for whatever reason and in any form, has had significant effects on macroeconomic variables, including economic growth.

The present study tries to analyze the effects of investments on economic growth and clarify their relations. It should be noted that Afghanistan after 2001 paid more attention to foreign direct investment as a source of economic growth. Multinational companies have played the largest share in the Afghan economy, so in the present study, Afghanistan has been selected as a case study.

The hypotheses considered in this study are as follows:
Safari Hypothesis: Foreign direct investment has no effect on the level of GDP.
Alternative Hypothesis: It seems that an increase in the amount of foreign direct investment can affect the level of GDP.

Concepts and terms in this research
The concept of economic growth
In Persian, the word growth means to grow, and this growth, depending on the case, can have a longitudinal, weight, surface or volume. However, growth has little meaning and the economic growth of a society means increasing the GDP of that society. In defining economic growth as a criterion for measuring the economic situation of a society; There is a more precise definition, which considers economic growth as the continuous increase in real GDP per capita of a society. In other words, the economic growth of a country is the increase of the real GDP per capita of that country over a long period of time (Noor Ebad 1395, 48). Kuznets describes economic growth as a long-term increase in the supply of diverse economic goods to the country's population (Lekhi, R.K.; Singh, Joginder; 2017, 91) [5].

According to Arthorys, economic growth is the increase in product per capita (Ahuja, 2016, 3) [1].
Economic growth rate
Percentage change in the amount of real gross product. Percentage of changes in per capita income of one year compared to another year are called fixed prices. Or a percentage increase in real GDP (at a fixed price) compared to the previous year. The calculation formula is as follows.

\[
\frac{\text{New Year GDP} - \text{basis of GDP year}}{\text{GDP year basis}} \times 100
\]

According to the past experiences and different cases of countries, four factors (population, domestic and foreign investment, innovations and foreign trade) can be considered as important factors of economic growth (Noor Ebad 2016, 52).

The concept of capital and investment
Capital is the component of wealth that can be used to produce more wealth.
Investment is the establishment of new enterprises or factories (factories, repairs and stores), the purchase of new machinery and equipment for use in the production of stocks added to the warehouse (it is the part of the property that is waiting for sale), Computer programs as well as residential houses (Habil 1396, 203).

Capital resources
Investments are usually in the form of internal and external sources, each of which has its own effectiveness and characteristics.

Internal resources
Internal sources of investment include individual savings of individuals in the community, corporate savings and public savings.
External sources of investment include government borrowing, foreign direct investment, and international aid.

Foreign investment
Foreign investment is an investment that is transferred to another country from abroad in the form of freely exchangeable currency or in the form of non-cash contributions.

Types of foreign investments
Foreign investments in the country are usually made in two main ways:

Public investment
Through loan, credit or foreign aid agreements are made bilaterally between two countries through the mediation of international organizations such as the World Bank, the International Monetary Fund and other organizations. Some of these loans and credits are freely available to applicants and can be used in any field without any guarantee. However, most of these loans and foreign aid are conditional and the granting country or organization specifies exactly the uses of those funds, and these credits are paid to the requesting country in several stages, provided that the use is ensured in the specific case.

Foreign private investment
Any physical or property asset transferred by private individuals or companies to countries other than their home country is called a foreign private investment and is made directly or indirectly.

Foreign Direct Investment (FDI)
These are investments in which the foreign investor invests directly in the host country (Todaro, Michael; Smith, Stephen; 2011, 732) [7].
In foreign direct investment, the foreign investor, with a physical presence at the place of investment and accepting financial responsibility, directly controls and manages the unit in the host country. Usually, foreign direct investment is legally independent or joint.
Independent foreign investment legally refers to the investment of foreign companies with 100% foreign ownership, and in such investments, there is no place for domestic investors and foreign investors have full independence in every way.
In developing countries, the evolved form of foreign investment is a joint venture in which the return on investment and the resulting profits are divided proportionally between foreign and domestic investors.

Foreign Direct Investment (FPI)
It is also called portfolio and stock supply, because this type of investment involves maintaining and changing the portfolio, which aims to minimize the risk and maximize the investor's profit. In this type of investment, the foreign investor enters the host country by purchasing shares or bonds, and in the administration and ownership, he has only the authority and the right to vote as much as his share, and accordingly, he gains or loses.

The relationship between foreign direct investment (FDI) and economic growth
Foreign direct investment promotes economic growth by providing foreign capital, and through economic growth, the interests of foreign investors are expanded. In addition, foreign direct investment usually enters the country with advanced technology, organization and top management. Therefore, foreign direct investment is known as the engine of growth in less developed countries. (Ranawdling) believe that the positive effect of foreign direct investment on economic growth is due to increased capital efficiency through the transfer of appropriate and advanced technology.
Therefore, the rate of technology transfer is positively related to the level of educational investment of the host companies. Therefore, increasing the level of educational investment through the channel of improving technology transfer can lead to increased economic growth. Of course, in addition to the transfer of appropriate technology, if foreign direct investment is combined with training of manpower at home and the development of human capital in the country hosting FDI can have a positive effect on economic growth.
Another issue with the impact of foreign direct investment on economic growth is that in countries where FDI has a greater impact on productivity, economic growth increases more. This increase in productivity due to the increase in FDI is more evident in countries with skilled labor, developed economic infrastructure, and higher incomes. In general, the existence of human capital and specialized and educated labor is necessary to attract capital and have a greater impact on economic growth.
Research background
Numerous internal and external researches have been done in this regard, which are as follows:
Trenti Huin Dan et al. (2019) in a study entitled Foreign Direct Investment and Short-Term and Long-Term Economic Growth: Empirical evidence from developing countries has concluded that cash flow from foreign direct investment can drive growth. Delayed in the short run while having positive effects in the long run, the research finally shows that in foreign direct investment in the long run is considered as a major factor of economic growth.

In a study entitled The Effects of Foreign Direct Investment on Economic Growth, Dr. Suluk Kojaron Prasit (2012) concluded that foreign direct investment has had a strong positive effect on Korean economic growth.

Liv and Malenck et al. (2014) in an article entitled The Effects of Foreign Direct Investment on Economic Growth A case study of economies in transition from the communist era concluded that foreign direct investment had significant effects on the economic growth of host countries.
AII (2013) in a study entitled The effect of foreign investment on Nigeria's economic growth has concluded that the negative relationship between growth rate and foreign direct investment in Nigeria due to the lack of sufficient foreign direct investment shows.

Research method
Source and type of data
In the present study, simple information from 18 years has been collected in the form of time, which includes the years 2002 to 2019. Various reliable sources have been used to collect information; While information on foreign investment and GDP has been collected from the World Bank by citation method and in the form of second-hand data. The collected data is of the time data type (Azimi 1398). The present study is a quantitative analysis and E-Views software was used for analysis.

Research model
The purpose of this study was to obtain the effect of foreign direct investment on growth rate in Afghanistan during the years 2002 - 2019. These effects of foreign investment on growth rate are analyzed by the following model.

\[ G = a + b_1 FDI + \epsilon \]

While:
G GDP growth rate, a and b1 are the parameters of model a, width coefficient of origin and b1, variable coefficient, FDI, direct foreign investment, and E are other variables in the model.

Research Findings
Descriptive Statistics
In order to obtain the relationship between foreign direct investment and the growth rate of GDP in the figures from 2002 to 2019, it is necessary. The information required for this study was collected from the World Bank and the Central Statistics Office of Afghanistan. Table 1 provides descriptive statistics for research variables. Table 2 shows the relationship between the variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Level</th>
<th>1st Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>0.6072</td>
<td>0.0960</td>
</tr>
<tr>
<td>FDI</td>
<td>0.1267</td>
<td>0.1478</td>
</tr>
</tbody>
</table>

Table 1: Descriptive statistics of variables

<table>
<thead>
<tr>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
</tr>
<tr>
<td>GDP</td>
<td>18</td>
<td>11897.85</td>
<td>21164.65</td>
<td>17428.2000</td>
</tr>
<tr>
<td>FDI</td>
<td>18</td>
<td>23.40</td>
<td>271.00</td>
<td>107.9278</td>
</tr>
</tbody>
</table>

Table 2: Relationship between variables

<table>
<thead>
<tr>
<th>GDP</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>.089</td>
</tr>
<tr>
<td>GDP</td>
<td>N</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.089</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>18</td>
</tr>
</tbody>
</table>

Table 3: Unit Root Test

<table>
<thead>
<tr>
<th>Model</th>
<th>Variables Entered</th>
<th>Variables Removed</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>FDI</td>
<td></td>
<td>Enter</td>
</tr>
</tbody>
</table>

a. Dependent Variable: GDP
b. All requested variables entered.
Source: Data analysis

Table 4: Research variables

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.413</td>
<td>.170</td>
<td>.119</td>
<td>3482.01098</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), FDI
Source: Data analysis

~ 157 ~

منبع: تحلیل و تجزیه داده‌ها

In order to obtain the effect of foreign direct investment on the level of GDP, the regression test or coefficient of determination is used, which is shown in the table below, and indicates the positive effect between the level of GDP and foreign direct investment. Based on the obtained figures, it shows that GDP is affected by 0.17 or 17% of foreign direct investment.
Table 6: Analysis of variance of variables

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>39871546.154</td>
<td>1</td>
<td>39871546.154</td>
<td>3.289</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>193990407.730</td>
<td>16</td>
<td>12124400.483</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>233861953.884</td>
<td>17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: GDP  
b. Predictors: (Constant), FDI  
Source: Data analysis

Conclusion

The present study focuses on the effect of foreign direct investment on the GDP of developing countries, especially Afghanistan. The results show that the relationship between foreign direct investment and the level of GDP in Afghanistan is wide and any change in Foreign direct investment has seen a 17% change in the level of GDP, which has been rejected at the level of error 0.1 of the zero hypothesis and the alternative hypothesis has been confirmed, while previous research in developing countries has often had such a result.

References

9. بررسی عوامل موثر بر جریان سرمایه گذاری خارجی در ریزه "بیات روح الله مطالعات سیاسی جهان اسلام .: مستند خارجی در افغانستان". 1394, 114-129.
11. تحلیل بر نقش سرمایه گذاری خارجی در رشد "مهدی نوری، دکتر ابوالقاسم". 1383, 181-208.
12. کابین: مرکز مطالعات اقتصاد کابل. 1395.
13. کابین: فرهنگ سیاسی سرمایه گذاری. 1396, 1395.