EMPIRICAL ANALYSIS OF FOREIGN DIRECT INVESTMENT AND THEIR ROLE IN ECONOMIC DEVELOPMENT OF THE REPUBLIC OF MACEDONIA: IMPORTANCE, EFFECTS AND POLICIES FOR THEIR PROMOTION

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ABSTRACT
Foreign direct investments are a very important component of a country's economic activity. Many developed and developing countries consider FDI as a vital resource for their economic and social development and prosperity.

The relationship between FDI and economic development has been the subject of a large number of researches, starting from simple theoretical analysis to more complicated empirical studies. The main goal of this research is to test the empirical relationship between FDI and economic growth in the Republic of Macedonia, thus testing whether such a relationship is or is not statistically significant. For analysis of the relationship between FDI and economic development we will use annual data for the period 1995 - 2014, which will be tested by the OLS method.

The results achieved by the econometric analysis show that there is a positive and statistically significant relationship between foreign direct investment and economic development in the country. So, inflows of FDI and export growth rates contribute to economic growth of the country.

Keywords: Foreign direct investment, economic development, the Republic of Macedonia.

INTRODUCTION
Over the last decade, foreign direct investments have attracted great attention and are considered as a means of accelerating growth and economic development of countries. Foreign direct investments are very important segment of a country's economic activity due to the effects it generates in the host country. Nowadays, foreign direct investments are one of the most expansive forms of international operations of many companies; they are analyzed by many economists, in many countries and at different time periods.

According to some researchers, FDI accelerates the host country's economic growth, while some other researchers consider that FDIs have bad effects on the economic development of the
countries. The main mechanisms through which FDIs affect economic growth are: the transfer of sophisticated technology and know-how, the development of human resources, the creation of new jobs, the increase of productivity and competition, the increase of exports, access to the fast on the global market, the creation of links between foreign and domestic firms etc.

Moreover, FDIs are a preferred method of financing external current account deficits, especially in developing countries, where these deficits can be large and stable. Foreign direct investment certainly brings positive effects to the economy, but it is also important to analyze the disadvantages deriving from the presence of FDI. Foreign direct investment is considered to have adverse effects for several reasons: job losses due to sophisticated and contemporary technology, bankruptcy and lack of support from domestic firms, deterioration of the balance of payments, the spread of economic problems around the world.

Republic of Macedonia as a country that still are facing economic reforms, consider the FDI as a locomotive of the country and as one of the most relevant factor. On average, FDI inflows into the Macedonian economy are relatively lower compared to some other advanced transition economies. At the same time, these facts clearly show Macedonia's current situation, thus relatively low rate of economic growth, a high trade deficit and a high and continuous unemployment rate. Therefore, the purpose of this study is the empirical analysis of foreign direct investment and their impact on the economic development of the country. Through regression techniques, it is intended to establish whether FDIs have a positive or negative effect on the country's economic growth. Generally, the objective of this paper is to better understand the link between FDI and economic development, and how much is important statistically that kind of connection for our country.

2. The theoretical view of the impact of foreign direct investments on economic development

Various countries are constantly making efforts to attract foreign direct investment due to the potential positive impact they may have on the economy. Over the last few years, the role of FDI has become increasingly important for developing countries and less developed countries. Indeed, they grew faster in the 1980s and 1990s. According to the World Bank (2007), global FDI flows reached a record $ 1.1 trillion in 2006 and there has been a steady increase in FDI in developing countries. After falling in 2012, global FDI flows had a 9% increase in 2013, to $ 1.45 trillion. (UNCTAD 2014). Nowadays, the overall participation of FDI represents more than 20% of global GDP, (Wan, 2010). The link of foreign direct investments with other economic variables can be seen from the microeconomic and macroeconomic point of view, influencing such variables such as the output of a firm but also the entire country, the balance of payments, employment, the size of the domestic market for goods produced through investments loans etc.
Although, the most relevant aspect is the macroeconomic, so the link between FDI and the economic growth of the host country. At a macroeconomic level, FDI influences the key disturbing variables for policymakers: balance of payments, employment, gross domestic investment and international trade.

According to Toulaboe, Terry & Johansen, FDI is expected to affect economic growth mainly through two channels. First, through accumulation of capital in the receiving country, FDIs encourage the inclusion of new inputs and foreign technology into the host economy's production function. Secondly, through knowledge transfer, FDI increases existing host country knowledge through job training, skills acquisition, and the inclusion of the alternative management practices. Some research has pointed out that the impact of FDI on economic growth varies depending on the ability of a country to absorb new technology. The reason is because domestic firms need a certain absorbent capacity before they can take advantage of new technologies brought by foreign firms (Le & Suruga, 2005). Bornstein, De Gregorio & Lee (1995) conclude that the positive net effect of foreign direct investment in economic growth is greater when the host country's workforce is of higher education. Similarly (Alfaro et al 2006) show that a country's capacity to benefit from FDI externalities may be limited by local conditions, such as the development of local financial markets or the country's educational level, that means the absorption capacity of the country host.

Also, foreign direct investment represents a preferred method for financing the current account deficit, especially when the deficit is too high and unsustainable. (Mateev, 2008). Although, FDI is not the only source of fiscal deficit financing or current account deficit, but long-term capital inflows in the form of FDI are preferable to debt financing, to avoid macroeconomic instability (Krkoska, 2001).

Foreign direct investment helps in the creation of new jobs, increasing of salaries, compensation of the employees according to their work efficiency, industrial job specialization, and the improvement of the living standard of the population.

FDIs play a decisive role in the host country's productivity growth challenge. Companies in these countries have the opportunity to explore new and foreign markets and in this way to generate more incoming and earnings. Make the access easier to new markets and so they can contribute to increase their exports and incomings, (Zoto, 2012).

In the literature, the effect of FDI on international trade is also known. In this context, FDIs not only increasing international trade flows from home to the rest of the world, but also the use of competitive advantages of different countries, while affecting product quality and lowering costs and their appreciation.
2.1 Review of literature

The relationship between foreign direct investment and economic development has been subject to a large number of research studies, ranging from simple theoretical analysis of the channels through which their effects are transmitted, their motivations and factors, that they determine and until empirical studies more complicated.

Most empirical evidence generally suggests a positive relationship between FDI and economic growth of countries. Neoclassical growth models as well as endogenous growth patterns provide the basis for most empirical analyzes on FDI and economic growth. As a starting point we have taken the traditional neoclassical growth model, followed by recent theories and empirical contributions. According to neoclassical growth theory it is expected that FDI will increase economic development through capital accumulation in the host country. Contrary to the neoclassical inflow, recent developments have led to so-called endogenous habitat models according to which FDI is expected to promote sustainable and long-lasting economic development through the transfer and dissemination of knowledge.

Bornstein Gregorio & Lee (1995) used cross-section data for 69 developing countries for the period 1970 to 1989. They concluded that FDIs have a positive effect on economic growth and that the magnitude of such a relationship depends by the quality of human capital of the host country.

Carkovic & Levine, (2002) applied the GMM technique to analyze the relationship between FDI flows and growth, using panel data covering 72 developed and developing countries. They did not find evidence of FDI impact on economic growth.

Some empirical research argues that the impact of FDI on economic growth varies depending on the ability of a country to absorb new technology. At the company level, Narula & Marin (2003) show that only firms with high absorption capacity can benefit from FDI harvests. Johnson (2006) conducted a study on the effect of FDI on the economic development of the host country, including 90 countries for the period 1980-2002. FDI inflows have a positive effect on the economic growth of the host country for the developing countries, but not for the developed economies. These results reflect the fact that in developed economies there is no difference between domestic and cross-border investments.

While the literature emphasizes the importance of FDI in economic development, one should not overlook the fact that economic growth may be a very important factor in attracting FDI flows. Moreover, with regard to developing countries, empirical studies show that some important factors, such as the trade regime, the human capital base in the host country, the financial market
regulations, the banking system and the degree of openness in the economy, have one positive impact on overall economic growth, (Ozturk, 2007). Similarly, Shin (2010) argues that FDIs are not automatically linked to economic growth. The effect depends on various factors such as the level of development of a country, or its economic structures and policies Krstevska & Petrovska (2012) based on the regression technique, estimated the impact of FDI on GDP, exports and employment in the case of Macedonia's economy, given their structural dimension. The main conclusion of the analysis is that FDI inflows have been an important factor for the growth of GDP and exports to the Macedonian economy. On the other hand, the impact of FDI on employment is negative mainly due to the low level of Greenfield investment and not the attractiveness of the intensive labour industry for foreign investors.

3. General characteristics of Macedonia and their link with FDI

Since the 1990s, the Republic of Macedonia faced numerous problems, ranging from the struggle for its sovereignty and independence to internal political regulation and its international recognition. Economic reforms in Macedonia have moved steadily, but some phenomena have negatively impacted the economic growth of the country. These include: corruption, lack of finance and unclear regulatory environment, which also negatively affected the attracting of foreign direct investment and resulted in high levels of unemployment. The economic conditions at the beginning of the transition process in Macedonia were unfavourable. The first years of transition were characterized by reduction of production and employment, inefficient industrial sectors and lack of emphasis in administrative institutions. After the break-up from the former Yugoslav Federation, RM was the poorest country and the highest unemployment rate of all socialist countries (about 20% in 1990). After the economic turmoil in the early 1990s, the government undertook a radical privatization process to build a privately-dominated economy, began setting the macroeconomic order and bringing inflation under control, which significantly improved the country's economic performance. The GDP of the country has declined sharply in the first years of transition until 1996. This situation is clearly shown in Figure 1. Figure 1 also shows that the Macedonian economy from its independence to date has had different rates of economic growth, representing itself as an unstable economy.
Figure 1. Real GDP growth in the Republic of Macedonia, 1991-2014

Source: Authors' calculations (provided by the World Bank)

GDP as a synthetic indicator of the success of the economy until 1995 marks a real decline and for the first time this macroeconomic indicator marks a positive real growth of 1.2% in 1996. The positive trends of this indicator continue until 2001 but are not enough for the recovery of the economy. In this year as a result of the war, GDP dropped by (-4.5%) compared to the previous year, (Pollozhani, 2008). After a slowdown in 2001, economic growth recovered again at around 1.5% in 2002. Over the coming years economic growth has had very modest positive trends until 2009, with GDP sliding down due to the international crisis. Economic recovery began in the second half of 2012, driven by the external sector, with production growing by 2.9% in real terms in 2013. (European Commission, FYROM progress report 2014).

During the 1990s, FDI flows were very small, reflecting at the same time the small size of the country (2 million people) and unfavourable circumstances such as the civil war in the former Yugoslavia, the trade embargo imposed by Greece as the result of the conflict over the name of the country, as well as internal political problems. In the first years after independence, FDI inflows were very modest. During the 1990s, the vast majority of foreign direct investment went...
to the manufacturing and construction sectors, while recent years' flows were invested in the services sector.

**Figure 2. Foreign Direct Investment Stock in the Republic of Macedonia ($ million)**

Foreign investment between 1990 and 1996 was only $64 million, of which $30 million was created in the privatization process. A significant FDI volume of about $150 million was recorded in 1998, followed by a further decline of only $88 million in 1999, mainly due to political risk and crisis in the region. In the next two years, the level of foreign direct investment grew due to the sale of several public companies, such as: "Stopanska banka" - Skopje, "ADOR" - Skopje, "Feni" - Kavadarci, "Buçim" - Radovis, Mermeren Kombinat "- Prilep," Learnica "- Ohrid," Brewery "- Bitola, etc., (Hourvouliades & Davcev, 2014). So, with the start of the privatization process, the flow of FDI has increased significantly, reaching a peak of $447 million and the highest share of GDP (13%) in 2001 as a result of the sale of Macedonia's Telecommunication "EMO" - Ohrid, "Zhito Luks" - Skopje, Skopje Fair, etc. According to the Statistical Bureau and the National Bank of the Republic of Macedonia, the cumulative value of FDI in the Republic of Macedonia at the end of 2002 was equivalent to about USD 106 million. FDI trend showed steady growth until 2004 reaching $323 million. In 2005, FDI fluctuated drastically at $97 million. Over the coming years, FDI inflows recover dramatically in 2006, reaching $225 million, mainly due to the sale of the electricity company. In 2007, FDI increased to $699 million, followed by sharp decline in later years (Shehaj, 2012).

If we are based on the chart below we can conclude that the largest investors in the RM are: Greece, Austria, the Netherlands, Hungary and Slovenia. Greek investors have targeted different industries, in particular the banking sector (Kreditna Banka from Alpha Bank, Stopanska Banka
from the National Bank of Greece); refining of oil (OKTA refinery) and processing industry (Brewery Skopje). The largest project from Holland has been the Metal Steel investor project. Regarding investments by Austria, most of the entries come from the energy distribution company EVN. Slovenian investors are active in various fields, including the Nova Ljubljanska Banka, telecommunication (ONE) and real estate (Mercury, ERA) (UNCTAD, 2012). Figure 3. Foreign capital stock by origin

![Foreign capital stock by origin](image)

**Source:** Authors' calculations (provided by BPRM (2008-2014))

Despite the need for foreign investment as relevant economic development factors, Macedonia is one of the transition countries that has attracted lower levels of foreign investment compared to other transition economies, especially Southeast Europe.

Overall, based on Table 1, we can observe that FDI has increased over the years. If we are based on absolute figures, Southeast European countries have reached the maximum in attracting FDI in 2008 and then fall to 2009 in 40.8% compared to 2008. Such a trend occurs mainly due to the economic crisis world. The global economic crisis in 2008 and 2009 reduced foreign investment both in global and RM, but intensive policies to attract foreign investors backed by economic presentations abroad have led to a rise in FDI flows in 2011. The growth of foreign investments in conditions of the global economic crisis confirmed the effectiveness of the policy of the Republic of Macedonia, which through a series of measures and policies contributed to the improvement of the business climate (Nenovska, 2014).
Foreign investment inflows in the country contributed to the creation of jobs, especially in the most attractive sectors of the country, such as financial intermediation and manufacturing industry, where from 2003 to 2007 the total number of employees, 50% are employed in these sectors. Increasing the number of employees was also observed in the construction sector, with 94 employees in 2003, the number of employees increased to 3195 in 2007. (State Statistical Office). In 2009, mergers and acquisitions (M & A) created new jobs for 51,236 employees, while Greenfield investments provided jobs for 17,850 employees. It has also been shown that foreign investment projects generate higher salaries for employees, as well as increase productivity in the workplace (UNCTAD, 2012).

Table 1. FDI flows in SEE countries (in millions of US $)

<table>
<thead>
<tr>
<th>Year</th>
<th>Romania</th>
<th>Bulgaria</th>
<th>Croatia</th>
<th>Bosnia and Herzegovina</th>
<th>Serbia</th>
<th>Montenegro</th>
<th>Albania</th>
<th>Macedonia</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>1,037</td>
<td>1,001</td>
<td>1,109</td>
<td>146</td>
<td>51</td>
<td>-</td>
<td>143</td>
<td>215</td>
</tr>
<tr>
<td>2001</td>
<td>1,157</td>
<td>812</td>
<td>1,582</td>
<td>118</td>
<td>177</td>
<td>-</td>
<td>207</td>
<td>447</td>
</tr>
<tr>
<td>2002</td>
<td>1,144</td>
<td>904</td>
<td>1,099</td>
<td>267</td>
<td>567</td>
<td>-</td>
<td>135</td>
<td>105</td>
</tr>
<tr>
<td>2003</td>
<td>1,844</td>
<td>2,096</td>
<td>2,048</td>
<td>381</td>
<td>1,405</td>
<td>-</td>
<td>178</td>
<td>117</td>
</tr>
<tr>
<td>2004</td>
<td>6,443</td>
<td>2,662</td>
<td>1,078</td>
<td>709</td>
<td>1,028</td>
<td>-</td>
<td>341</td>
<td>323</td>
</tr>
<tr>
<td>2005</td>
<td>6,866</td>
<td>4,098</td>
<td>1,777</td>
<td>623</td>
<td>2,05</td>
<td>-</td>
<td>262</td>
<td>145</td>
</tr>
<tr>
<td>2006</td>
<td>11,45</td>
<td>7,874</td>
<td>3,219</td>
<td>845</td>
<td>4,968</td>
<td>-</td>
<td>325</td>
<td>427</td>
</tr>
<tr>
<td>2007</td>
<td>10,29</td>
<td>13,875</td>
<td>4,947</td>
<td>1,841</td>
<td>3,431</td>
<td>937</td>
<td>652</td>
<td>733</td>
</tr>
<tr>
<td>2008</td>
<td>13,849</td>
<td>10,296</td>
<td>5,812</td>
<td>1,004</td>
<td>2,996</td>
<td>975</td>
<td>1,24</td>
<td>611</td>
</tr>
<tr>
<td>2009</td>
<td>4,926</td>
<td>3,896</td>
<td>3,4</td>
<td>138</td>
<td>1,935</td>
<td>1,549</td>
<td>1,343</td>
<td>259</td>
</tr>
<tr>
<td>2010</td>
<td>3,204</td>
<td>1,866</td>
<td>845</td>
<td>443</td>
<td>1,34</td>
<td>758</td>
<td>1,089</td>
<td>301</td>
</tr>
<tr>
<td>2011</td>
<td>2,557</td>
<td>2,124</td>
<td>1,242</td>
<td>471</td>
<td>2,7</td>
<td>556</td>
<td>1,049</td>
<td>507</td>
</tr>
<tr>
<td>2012</td>
<td>2,629</td>
<td>1,578</td>
<td>1,336</td>
<td>334</td>
<td>1,185</td>
<td>618</td>
<td>920</td>
<td>332</td>
</tr>
<tr>
<td>2013</td>
<td>4,108</td>
<td>1,887</td>
<td>588</td>
<td>315</td>
<td>1,974</td>
<td>446</td>
<td>1,253</td>
<td>413</td>
</tr>
<tr>
<td>2014</td>
<td>-</td>
<td>2,027</td>
<td>-</td>
<td>560</td>
<td>-</td>
<td>496</td>
<td>1,161</td>
<td>126</td>
</tr>
</tbody>
</table>

Source: World Bank

The best indicator of reforms to improve the business conditions undertaken by the Macedonian government in the last six years is the ranking in Doing Business, in which from the 96th place Macedonia in 2005-2006 in 2012 it was ranked 23rd out of 185 countries in the world.
(Nenovska, 2014). Macedonia is ranked as the leading countries in Southeast Europe for ease of doing business in just a few days. This period is only 4 days.

Table 2. Doing Business and the Days Needed

<table>
<thead>
<tr>
<th>Country</th>
<th>Days needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
<td>1</td>
</tr>
<tr>
<td>Australia</td>
<td>2</td>
</tr>
<tr>
<td>Macedonia</td>
<td>4</td>
</tr>
<tr>
<td>Belgium</td>
<td>4</td>
</tr>
<tr>
<td>Albania</td>
<td>5</td>
</tr>
<tr>
<td>Canada</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: Doing Business 2010

In 2014, the global ranking of countries according to the ease of doing business puts Macedonia in 25th place with a performance slightly lower than the other years. Macedonia ranks in the first group of Western Balkan countries ahead of Bulgaria, Greece and Croatia in terms of protecting investors (16), obtaining loans (3), starting up business (7), and paying taxes (26). However, its position is lower in terms of treating construction permits (63), receiving electricity (76), and registering property (84).

4. Econometric analysis of the impact of foreign direct investments on the economic development of the Republic of Macedonia

Graphical analysis

As we pointed out in the theoretical part, foreign direct investment has an effect on economic development and vice versa. So, the higher the foreign direct investment, the higher will be the economic growth of the host country, but the higher the economic growth, the higher will be the foreign direct investment flows. First of all we will see this connection from a graphical point of view and then we will analyze empirically.

As shown in Chart 4, there is generally a positive relationship between foreign direct investment and gross domestic product. The higher the level of GDP, the higher the level of FDI. This positive correlation confirms once again that the more stable and stable the economy of a country, the greater the investments made in that country.
Figure 4. GDP and FDI performance in the Republic of Macedonia for the period 1995-2014

Source: Authors' calculations (provided by the World Bank)

Econometric analysis

4.2.1 Methodology and data

To identify the econometric link between FDI and economic development, it is important to build an equation to ascertain or deny such correlation between the variables included in the model. Since the purpose of this study is to assess the dependence of the country's economic development on FDI, we will use multiple regression techniques. To build a good predictor model we will use multifactorial regression of the type:
Where: \( Y_i \) is the dependent variable; \( X_1, X_2, \ldots, X_n \) are independent variables; \( \beta_0, \beta_1, \beta_2, \ldots, \beta_n \) are the parameters to be calculated; \( \beta_0 \) is the constant; \( \beta_1 \) is a parameter that measures the effect of the independent variable 1 on the dependent variable if constant constants are kept; \( \beta_2 \) is a parameter that measures the effect of the independent variable 2 on the dependent variables if the other factors are constants; \( \varepsilon \) is the term of error that contains other factors that affect the dependent variables but are not included in the independent variables.

Turning to the specification of our model, for a more detailed study of the impact of FDI on economic growth, we will use the equation:

\[
Y(GDP) = \beta_0 + (FDI) + (EXP) + \varepsilon
\]

In the equation (GDP) represents the dependent variable, \( \beta_0 \) represents the value of the constant which represents gross domestic product rates in the absence of any dependent variables, \( \beta_1 \) (FDI) is the value of the independent variable named in the concrete case with the rate of the increase in foreign direct investment, which shows us the relationship to the dependent variables, \( \beta_2 \) (EXP) represents the other explanatory variable, which in the concrete case represents the growth rate of exports of goods and services and \( \varepsilon \) represents the error term which includes all other factors that may affect the dependent variables that are not explicitly included in the model.

For the regression model, annual data are collected for all dependent and independent variables from the World Bank and the People's Bank of Macedonia for the period 1995 - 2014. So the number of observations is 19.

5. Results of the study

The model results are presented in the table below.

\[
Y(GDP) = + (FDI) + (EXP) + \varepsilon
\]
Table 3. Assessment of economic development linkage with foreign direct investment and export

<table>
<thead>
<tr>
<th>Variables</th>
<th>GDP growth rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.379</td>
</tr>
<tr>
<td>FDI</td>
<td>0.322</td>
</tr>
<tr>
<td>Export</td>
<td>0.066</td>
</tr>
<tr>
<td>corrected</td>
<td>0.496</td>
</tr>
<tr>
<td>Normality test remains are normal</td>
<td>0.877</td>
</tr>
<tr>
<td>Breusch - Godfrey Serial correlation LM</td>
<td></td>
</tr>
<tr>
<td>test</td>
<td>0.224</td>
</tr>
<tr>
<td>Breusch - Pagan / Cook-Weisberg test for</td>
<td></td>
</tr>
<tr>
<td>heteroskedasticity</td>
<td></td>
</tr>
<tr>
<td>the remains are homoskedasticity</td>
<td>0.854</td>
</tr>
</tbody>
</table>

According to the results of the diagnostic tests we can say that regression is well-specified. Given the value of the probability coefficient $R^2$ (0.49), the explain ability of the model from the independent variables is satisfactory. So in this regression $R^2$ shows that around 50% of the real GDP growth variation is explained by FDI and export growth rate. $F$ - statistics is a measure of the overall significance of the estimated model, thus testing the common significance of independent variables. To estimate the importance of the model according to the table above, we raise the zero and alternative hypothesis.

$H_0$: Independent variables do not affect the dependent variables

$H_1$: at least one of the independent variables has an impact on the dependent variables Or

$\beta = \ldots = 0$

$\beta = \ldots$

If $F_\text{valued} > F_\text{critical value}$ then we reject $H_0$ and accept the alternative hypothesis, so there is at least an equation coefficient that gives the appropriate importance to the econometric model.
According to the regression table obtained with the Stata 13.0 program, we see that $F_\text{valued}$ is 8.39 compared with $F_\text{critical value}$ with $\alpha = 0.05$ and degree of freedom $k-1 = 2$ and $nk = 20$ is a given value 3.49 (see the relevant statistics tables). Since $F_\text{valued} = 8.39 > F_\text{critical value} = 3.49$ then $H_0$ falls down and stays $H_1$, so the model is statistically significant.

Apply $t$-statistics for hypothesis testing for the significance of a variable. If $t > (\alpha / 2)$ we say that the variable is statistically significant and should not be excluded from the model. We build hypotheses:

$H_0$: the FDI variable is not important, or is not the fastest variable for economic growth.

$H_1$: the FDI variable is important, or is the accelerator for the economic growth variable.

Based on our model, for foreign direct investments we see that $(3.30) > t_\text{(critical value)} = 1.74$, i.e. that FDI is statistically significant and there is linear dependence between GDP and FDI.

$H_0$: the EXP variable is not important, or is not a fast-paced variable for economic growth.

$H_1$: the EXP variable is important, or is the accelerator for the economic growth variable.

Also for export, $t (2.80) > t_\text{(critical value)} = 1.74$, which means that this parameter is important and should not be excluded from the model. At the same time, starting with the $p$-values we see that all the coefficients are statistically significant, i.e. less than 0.1.

From data processing with Stata 13.0, we can extract the equation: Economic growth = 1.379 + 0.097 (FDI) + 0.023 (EXP)

From the equation we can explain:

If foreign direct investments are increased by 1 unit, then we see that economic growth is 0.097, i.e economic growth of 0.097 units. On the other hand, if the growth rate of exports increases by 1 unit, this will lead to an economic growth of 0.023 units, ceteris paribus.

Conclusions

The purpose of this study was the empirical research of the impact of FDI on the overall economic development of the Republic of Macedonia. We used multi factorial regression models to analyze the effect of FDI and export on the gross domestic product.

The main conclusion of the empirical analysis is that the relationship between the growth rate of FDI and real GDP growth is statistically significant, respectively there is a causal link between these variables. So, if foreign direct investments grow by 1 unit, then there will be an economic
growth of 0.097 units. There is also a positive and statistically significant correlation between the real growth of GDP and the growth rate of exports. If the growth rate of exports increases by 1 unit, this will lead to an economic growth of 0.023 units, with a parity of ceteris. Also, according to the graphic analysis we can see that there is a positive relationship between FDI and gross domestic product. The higher the level of GDP, the higher the level of FDI. This means that the more sustainable the country's economy is, the more investments there will be in that country.

Given the results of the model it can be concluded that FDI is expected to have a positive impact on economic growth and should therefore be encouraged. Therefore, key sectors need to be identified, those having the highest potential to contribute to the country's economic development and at the same time to choose the most appropriate way for channelling and integrating FDI into the economy. Also, geographic diversification for FDI withdrawal should be considered. The current statistical results show that the main sources of FDI in Macedonia are EU countries, therefore RM should work on attracting new partners as foreign investments.

Reference


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