Evaluation of Economic Growth in Albania in Relation to FDI and Other Indicators

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Abstract

Foreign Direct Investment are a very important segment of the economic activity of a country, due to the effects that they bring. Foreign Direct Investments in Albania are often considered as the locomotive of the country because of their concentration in important sectors of its economy. In theory, in literature and also in practice, the effects of foreign direct investments (FDI) are known. FDI have brought significant positive effects on the economy, but this certainly does not mean that the presence of FDIs in the economy of a country is not associated with adverse effects Specifically the main purpose of this paper is the theoretical viewpoint and the links that it suggests for FDI in general. One of the main links that the theory suggests is the connection between FDI and economic growth. But later, as the ultimate purpose, remains the connectivity testing of FDIs in the country with economic growth, to test the authenticity of their connection, finding out whether this connection is statistically significant or not. The structure of this paper is divided into three main parts. Initially is intended to provide a theoretical frame and to look at the definitions and links of FDI with various economic aspects. Secondly we will make an empirical analysis of FDI connection with economic growth, which can be viewed in two perspectives: the diagnostic (graphic) and statistical (econometric connection). Finally we will give the conslucions on this subject.

Keywords: Foreign Direct Investments, economic growth, domestic investments, net exports, model.

1. Introduction

 FDI have been a new trend of the economy of the 20th century which tends to internationalize the business and trade, bringing mutual benefits, both for the investor and for the host. FDI are important not only in the global context, but especially for our country and are ofter trumbeted as political issue. The Albanian legislation, precisely the Law "on Foreing Investments" no. 7764, of 02.11.1993[1], states that: " Foreign investments in the Republic of Albania are not conditioned upon prior authorization. They are permitted and treated based on conditions not less favorable than those afforded to domestic investments in similar circumstances, except land ownership, which is regulated by special law. In all the cases and at any time, investments have an equal and impartial treatment and enjoy complete protection and security". FDI represent a very dynamic economic variable especially after 1990, but significant movements began before 1980. FDI occupy about a quarter of the international movements worldwide (Eustat 2000). This rapid movement of FDI has come from international competition and the removal of barriers in the markets of products (goods and services), also present in factor and financial markets. It is often considered (Jones (1996), that the competitive advantage of some developing countries, has led FDIs to change direction, in the case of low wages mainly in the developing countries. But it is noticed that FDI continue their growth cycle, despite the lowering of international trade flows (Jeon 1992 and Moore 1993).

2. Literature Review

FDI know many definitions, often with consequences for their measurement, and it is understood for different figures. But the concept that prevails in this paper will be an international concept, as follows:

"Foreign Direct Investments according to OECD (2007), reflect the objective of obtaining a lasting interest in an enterprise resident in another economy (the direct investor) in a resident unit of another economy (the enterprise of the direct investment). The lasting interest implies the existence of a long-term relationship between the direct investor and

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[1] *Law on "Foreign Investments" No. 7764, of 02.11.1993*

the enterprise and a significant degree of influence by the direct investor on the management of the enterprise. The FDI index is important for the developing countries and for developed countries as well.

FDI nuances have taken different shapes by classifying them in *5 types* (Millar, Clegg and Chryssochoidis, 1997)*.

Below we will describe the classification based in the theoretic treatment of these three authors, along with the shapes that FDI have in the Albanian market.

- *The first type* of FDI is made to gain access to specific factors of production, e.g. resources, technical knowledge, patent or brand names etc. owned by a company in the host country. This case is applicable when such assets are difficult to transfer or are not found in the country of origin of the investment. In Albania this can be illustrated by the example of the Turkish company "*Kurum*", which deals with the production and export of Albanian steel products (official website of Kurum International).

- *The second type* includes FDI made to gain access to cheaper factors of producton like the workforce. The second type of FDI is developed by Raymond Vernon in his product cycle hypothesis. Such FDI are incouraged by host country governments when they apply incentives by providing some form of tax concessions or subsidies. A typical example for Albania are the clothing companies like the Italian company "Tremaglia" in Durrës, which is using the Albanian qualified workforce because it ensures minimal costs as a consequence of the relatively lower salaries. The fact is that the cost for 1 shirt does not go beyond 2 euro/unit (official website Tremaglia). If the government is using an import substitution policy instead, foreign companies may only be allowed to participate in the home economy if they possess technical or managerial know-how that is not available to domestic industry. This case does not apply to Albania because it is largely known that our country has a long lasting dependence from imports, independently from the fact that exports have had a significant increase during last years. (Source INSTAT).

- *The third type of FDI* involves international competitors undertaking several investments in one another through the establishment of Joint Ventures* in order to gain access to each other's product ranges. This type of FDI is largely spread as a consequence of stronger competition between similar products and achievements in research and development. This is the case of the leader Albanian company in aluminium "PESPA AL", which has performed FDI in neighboring countries like Italy, Bosnia-Hercegovina and FYROM (official website Pespa AL).

- *The fourth type* of FDI concerns the access to customers in the host country market. In this type of FDI, efforts are made to ensure the same products and services for the customers of the host country and even for the ones of the investing country. It often turns out to be almost impossible because of certain services or the inability to meet a certain kind of demand. The inability of trading some products and services in the host country has been a key factor in the growth of this type of FDI. Here we can mention companies like AMC Cosmote or Vodafone Albania, which in a short time managed to provide in Albania the same mobile services that they offer in their home country, Greece.

- *The fifth type* of FDI relates to the trade divisionary aspect of regional integration. This type occurs when there are location advantages for foreign companies in their home country but the existence of tariffs or other barriers of trade prevent the companies from exporting to the host country. The foreign companies therefore jump the barriers by establishing a local presence within the host economy in order to gain access to the local market.

Some economists like Caves, Kojima and Narula, have provided their classification of FDI from the investor point of view (the country of origin of the FDI)

Caves divides the FDI in: horizontal, vertical and conglomerate (Caves 1971).

Horizontal FDI aim to produce the same or similar products with those produced in the home country. *Vertical FDI* on the other hand, consists in geographical division of different phases of the product life cycle. By doing so trade across borders is encouraged (within the company), and increases the likelihood of branches to export. *Conglomerate FDI* can be a mix between horizontal and vertical FDI, which involve the investment in another type of industry in the host country.

Kojima (1978) classifies FDI as trade oriented (they generate incrased demand for imports and increased offer for exports) or against-trade oriented (they have negative impact on the trade). Kojima underlines that in host developing countries FDI that go to industries using intensive workforce are " Trade creating". FDI that go to industries with intensive capital are called "trade replacing" or " trade destroying".

Narula classifies FDI as a) "*Trade remplacements FDI*" – that are oriented towards activities that supply the internal markets and substitute; b) *Trade promoting FDI* – aim at supplying other markets; c) *Trade complementing FDI* – when are oriented towards rationalized production of complementary equipments for export purpose and d) *Trade avoiding FDI*

– if they aim at using the unused parts of the market through a trade preference agreement.

Meyer (1998), underlines that "there are precisely the types of markets that make the difference between foreign direct investors" adding that in this case these FDI take charge of the factors price.

Summarizing what stated above, it is important that FDI should be understood for what they are in reality because often misunderstandings raise on this matter. From this point of view, we should make the difference between short-term investmens which deal only with *portfolio investments* without including the rights of management and long-term investments.

The latter do not imply such commitment form the foreign investor who cannot be avoided easily. So, we can say that FDI can be classified as follows:

- *"Greenfield investments"*- new foreign capital which is invested under the form of shares in a company. This form of foreign investmet is the most preferred because it creates new jobs in the host country.
- *"Reinvested profit"* – although in this case the foreign capital that is provided is not entirely new, investments of this kind create opportunities to increase the capital stock, assets and productive capacity in the host country. Investments of this kind are a good indication that investors are comfortable with the business climate in the host country.
- *Loans between companies* - are capital transfers by a company abroad to another company in the country, against the respective interest rates. This form of investment helps foreign investors to finance their businesses and create more opportunities for them to contribute to the economic development of the country.
- *Mergers and acquisitions* - are a less acceptable form of FDI as long as they are not necessary like in the case where a state owned company with negative performance for a long time goes towards privatization. Other forms of FDI which have nothing to do with the transfer of capital and play a role in the economic development of the host country are: outsourcing, licensing, franchise agreements, etc.

It is important for FDI issue to see the causes and consequences of foreign capital in the country. Theoretical views on this issue are different ranging from very extreme views protecting nationalism under which FDI lose the identity of a country, continuing up to the ideas that they are an aspect of the economy, without which the latter can not exist and therefore should be viewed positively

The alternative approach in terms of FDI is that in principle they are seen as a channel of opportunities, especially for developing countries. *According to Lipsey (1999),* FDI are the main and dynamic source for investments for a developing country. Nevertheless, FDI flows should not be seen only from the perspective of a single flow, but many subsequent flows after the initial capital. Specifically in addition to the initial investment, FDI are followed by international capital movements, from the host country towards to country of origin, movement of managerial skills, technology and so on. FDI play an important role in transforming countries, particularly the post-communist countries (*Moose 2000).* Changing the structure means progress and opening of the economy towards the international perspective and orientation towards competitive advantages and international cooperation. One of the advantages of FDI is that they help in the economic development of the country where the investment flows. FDI usually apply to developing countries. During the '90s, they were a major source of external financing for most countries that had an economic growth perspective. FDI also helped some countries when they faced economic difficulties. FDI also allow the transfer of technology which is mostly done in order to ensure capital inputs. Countries that have received FDI from another country can develop their human resources, by employing young people in the activity of any particular businesses. Profits generated by FDI in that country, may be used for the purpose of contributing to taxes on corporate income of the recipient country. FDI assist in the creation of new jobs, increase the wages of workers, facilitating lifestyle etc. Foreign direct investments usually contribute on the development of the productive sector of the host country. They play a crucial role in increasing the productivity of the host countries. Companies in these countries have the opportunity to explore new foreign markets, thus generate more revenue and profits by facilitating access to new markets and growing exports and income coming from them.

FDI are a source for financing the Balance of Payments deficit by improving the lending conditions in host countries. They play an important role in creating the appropriate economic conditions for EU membership. The effects of FDI are divided into economic, political and social effects. *According to the principles of neoclassical economics*, FDI enhance the welfare of the host country under certain conditions (Lall and Streeten, 1977) such as the maximization of profit of the international company and having competitive advantage in the host country, in terms of inputs and their prices.

The economic effects can be seen in both *microeconomic* and *macroeconomic* perspective by touching variables such as the output / product of a company and of the whole country, the balance of payments and even the structure of

the market. The theory recognizes that the arrival of foreign companies can improve competition or even worsen it by attempting to operate in non-competition forms, because of their dominant position.

But the main point of view is the macroeconomic one, which links FDI with the output / total product and with the growth of the host country. Theories of economic growth and development focus on the growth of the real income per capita and link this variable with many other factors such as capital accumulation, population growth, technological progress and the discovery of new natural resources. However, these theories evidence capital accumulation among these factors as the pillar of economic growth and the development of the host country.

Specifically endogenous growth theory emphasizes the effects of exports as a factor that influences in establishing a sustainable and long-term economic growth, allowing technologicaland dynamic innovation from outside, especially from the countries of origin of FDI *(Lucas88, Romer 86, 89, Grossman and Helpman91, Edwards 92).*

FDI are seen as the most potential beneficiaries of economic growth especially for emerging countries and sometimes they are needed to give a boost to economic growth of a country (Adewumi 2006). FDI can help the host country especially in technology transfer and its use for domestic investment, transfer of know-how and managerial or professional skills. Krkoska (2001) in his study emphasizes the importance of spillover in the host economy, and the replacement of depreciated capital of that country with the new capital coming from foreign direct investment. This capital increases the productivity of the host country. But another effect of FDI is the increase of "R & D" (research & development) flow in the host country and their distribution in other companies.

The literature also highlights the effects of FDI on international trade (Markusen, 1998). This is seen not only in terms of intensification of international trade flows from the host country to the rest of the world, but also from the perspective of using competitive advantages of different countries. As e result, we have an increase in international trade and often quality increase. As a consequently of the products' cost decreases and therefore their price goes down.

Following this theory, the conclusion drawn is that some investments are better if they remain under foreign management, since there is little government intervention. Mostly that is seen as a of emerging and developing countries, consequently on the other hand international companies are more independent in terms of ownership and management. In addition to these positive impacts there are known even negative impacts, as was preceded in earlier paragraphs. Related to the economic growth, there are known negative impacts such as the movement of capital and its return to the country of origin, even negative effects on the environment, or increasing the power in one country and the influence on the government policies and decisions *(Jones 1996).*

This paper will focus largely on FDI in particular on their connection with economic growth. Economic growth is measured by GDP growth, but as we mentioned effects as international trade, then we will see the export and re-export. The theory in this point of view connects in positive and significant manner two main variables, when the high values of FDI are associated with high values of economic growth.

Besides the positive aspects, the theory displays alsot skepticism. Specifically *Alfaro (2003)*, notes that FDI flows, particularly in the manufacturing sector may not have been positive or negative or insignificant effects. Meanwhile, in the sector of services effects are often undefined and unclear. For countries in transition correlation of FDI with economic growth is statistically uncertain (*Lyroydi at al, 2004)* and *(Stanisic and Jankovic, 2007).* So, in addition to two aspects of this relation the correlation of FDI with its economic growth remains to be seen in the case of Albania. Based on studies of different authors on microeconomic and macroeconomic effects of FDI, we give the results in the following table:

Study	Issues	Main Findings
Zukowska-Gagelmann (2000)	Examination of FDI effects on productivity	FDi have negative impact on the performance of many local companies
Riffield and Taylor (2000)	Impacts of FDI labor market in the UK	FDI bring increase of wage inequality and use of qualified workers in local companies
Kearns and Ruane (2001)	Correlation of FDI and growth in Ireland	Ireland has gained profit from FDI especially in R&D
Fan and Dickie (2000)	Impacts of FDI labor market in the UK	FDI occupy 4-20% of GDP growth
Xu and Wang (2000)	International trade and FDI as channels for technology distribution	Unimportant evidence for the mentioned connection
Nachum (1999)	Impact of FDI on the trade competitiveness	Weak connection of FDI with advantages in general
Asafu- Adjaye (2000)	Effects of FDI in economic growth of Indonesia	FDI have a statistically important role in the economic growth
Jarolim (2000)	FDI role in the economic transition of Czech Republic	Spillover effect is statistically not important
Djankov and	Connection of FDI and productivity in	FDI have a positive impact in the total productivity of local

Hoekman (2000)	Czech Republic	companys' factors
Hsu and Chen (2000)	Effects of FDI on work productivity in Taiwan	FDI increase productivity of small and medium enterprises, while posing a negative impact on large companies
Zhang (1999)	The effects of FDI on economic growth in China	Long term and mutual connection of FDI with economic growth
Walkenhorst (2000)	FDI spillover of industries in transition economies	FDI bring capital, but also managerial skills coupled with technology

According to Moose (2000) it's important to evidence other **non-economic** factors. If until now we have seen the reasons and the effects of FDI, it is important to explain that there are often non-economic reasons to determine the direction of FDI, such as *the political risk of a country, fiscal policies, ownership problems, the mentality, the culture,the problems of a country with other countries, etc.*

3. Empiric Analysis of FDI in Relation to Economic Growth

Several studies show that FDI increase the efficiency of resources and factors of production in the host country, so the influence of FDI on economic growth is considered positive. Generally, FDI influence the host country by increasing productivity and shift it through two main channels, quality and quantity of production factors and efficiency in their use (OECD, 2002).

The first channel shows that the efficiency of the use of factors of production depends on many factors, among which are: openness to the world market, competitiveness and convenience of businesses to establish and develop. FDI can contribute to all these by providing access to the network of international companies, overcome entry barriers and bring the practice of foreign companies and corporate governance. Precisely for these reasons, Albania today is a country which has embraced foreign investments by offering more facilities to foreign companies operating in the country. UNDP (2010) shows that the speed of setting up a business in Albania is 5 days, which ranks Albania 15th out of 183 countries.

The second channel incudes the quality and quantity of production factors, which may be affected by FDI in two ways: a) by helping simplify monetary obligations which prevent the host country to achieve the optimal level of capital formation b) influence the host country in competence ans skills beyond the investment company. FDI can have an impact on export growth of the host country. An increase in exports would lead to an increase in GDP (Haderi, 2010). Investment companies with their competitive strength through FDI could increase their exports in long term (Lee 2002). In the case of Albania, investment companies are able to reduce their costs of production through the exploitation of low cost labor force. Thus they operate through FDI in developing countries like Albania and produce finished products for export.

According to Lall (2002) FDI′ inflow does not affect directly GDP, but it affects other economic factors that have an impact on economic growth. The impact of FDI on economic growth cannot be measured directly, but only through factors where FDI contributes.

Benefits coming from FDI like: growth of competitive potential through gross production of companies; entry of new technologies; experience in managerial skills; increased knowledge on the production gained through contacts with foreign investors and opportunities for optimal use of human resources and their professional growth have a great impact on the economic growth of a country. (V.Nakuci and K.Zizo)

FDI appear in the host country under the form of multinational companies, setting up local operations through their unions in order to unable facilities in production and reduce unemployment. (Elena Raducensku, 2009). Jones (1996) states that "Capital transfered from multinational companies complement domestic savings and can contribute to the formation of domestic capital thus increases domestic investment. For that reason, FDI have a crucial effect on the local economy by creating new connections for the market, which can stimulate the production in supplyers and distributors and create a distribution channel for technology transfer".

FDI can not influence only economic growth. The economic growth itself can influence FDI level. Foreign companies which come and invest in Albania take into account the risk of the investment and incouraging or discouraging information from our economy. The business climate is the most important, but the conomic growth is equally important. A country with high economic growth would be immediately attractive for investors because in that country productivity increases every year and investors can genereate income.

Besides the favorable factors that bring FDI on economic growth they are likely to also have a negative impact. Carkovic and Levine (2002), conclude in their study that FDI don't have a strong and independent influence on economic

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growth. Therefore, despite a large volume of FDI a country may not have a positive economic growth. Causes may vary from social and political factors. It also happens that many of the activities of multinational companies can disfavor domestic companies as a result of outdated technology and poor competitiveness by driving domectic companies towards bankruptcy.

3.1 Graphic analysis

As the theoretical part underlines, FDI are known for their impact on economic growth and vice-versa. Following this rule, as higher foreign direct investment, the higher the economic growth of a country, but also the higher economic growth, the higher will be the foreign direct investments.

Firstly we need to see this connection from the graphic point of view and after detect and analyze it from the empirically.

Chart no.1: FDI inflow (in million $) and real GDP real in Albania
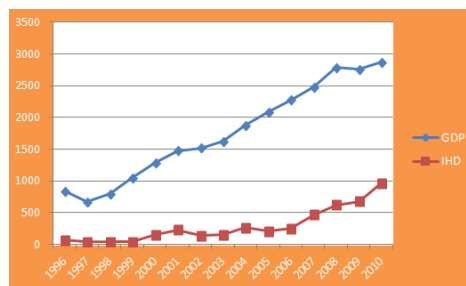
Source: Bank of Albania (2011), graphic presentation of the author

As it can be noticed in the graph, there is a positive connection between the FDI and the domestic gross product (the amount of all the goods and the services produced in a country, in a specific moment). The higher is the level of the GDP, the higher is the level of the FDI. That is why the more stable the economic climate of a country, the bigger the investments in that country will be. What is particular for this case is the presence of both variables with an upward trend unlike the other countries where the tendency of the GDP is more fluctuating, particularly after the last global crisis. In this case, in this graph, it can be seen in the form of a graphic diagnosis that their increasing tendency is almost the same. So there is a fluctuation movement between these two variables. The years 2007 up to 2010 are very significant. The connection becomes closer and if it is diagnosed with the naked eye it moves towards an exponential connection. However, it does not necessarily mean the contribution of the Foreign Direct Investments in the increase of the GDP, respectively in economic growth of Albania.

3.2 Econometric analysis

3.2.1 Methodology

The econometric connection of the FDI with the increase of the GDP is considered very carefully in order to identify the bonds from the econometric viewpoint. That is why another bond should be set up, an equation to prove or negate such thing. The methodology used in this case is the one of a multiple regression. The economic increase measured with the percentage of the GDP is an undependable variable with more importance. But as the analysis is not complete, because there are other determinant variables in the GDP, then it is necessary to include some of them. Longobart at al (2008) chooses the formation of the capital which is the total amount of the investments in the economy in a specific period. Inner investments are included in this variable and even investments by multinational companies (Foreign Direct Investments), which otherwise is the supplement in the capital physic stock, despite the origin. Another important variable which is chosen to be taken is even the net export, which is expressed as the difference of the export with the import in a specific economy, in a specific period of time. What is aimed with this variable is the measurement of the foreign sector in economy; this is particularly considered to be taken as a variable in the developing countries and in those ones which

have got high imports compared to the exports and the domestic products.

In this case the formulas are as follows:

$$\hat{Y}_t = \alpha + \beta_1 fdi_{t-1} + \beta_2 gcf_{t-1} + \beta_3 nx_{t-1} + \varepsilon_t \qquad (1)$$

Where

$$\hat{Y} = (GDP_t - GDP_{t-1})/GDP_{t-1},$$

And

$$fdi = \frac{FDI}{GDP},$$

$$gcf = \frac{GCF}{GDP} \text{ and }$$

$$nx = \frac{NX}{GDP}.$$

Y is the GDP per capita of the growth and g is a linear function of the domestic investments (gcf), Foreign Direct Investments (fdi) and the growth exports (nx). FDI has been included in the function of the production to consider and to observe the effects that are found in the direct growth process, increasing the physical capital in the economy, thus indirectly promoting the technological change and encouraging the human capital of development.

Like in the graphical diagnosis of the connection, the data is helpful even in this case, but in order to have a long-term connection the previous years, according to the World Bank from the year 1990 until 1996, have been considered, adding them to the other data. So, in total, for the econometric model, some other years are added. They serve to increase the database to see the regression and the correlation of these two parametres (1990-2012).

This way the variables are built as follows: The increase norm of the real GDP per capita has been used as a dependable variable (GDPCG) in the growth equation. The explanatory variables are: the norm of the exports growth (EXPG), is used as the opening measure, the report of the FDI of the GDP (FDI). The formation of the stock capital of the GDP (GFCF), has been used respectively as foreign measures and domestic investments. The summarizing descriptive statistics of the interest variables (GDPCG, GFCG, FDI, EXPG) indicate a considerable heterogeneity at the data. The term "domestic investments" has been included as an explanatory variable as it influences on economic growth, is one of the indicators of economic growth, meanwhile the exports have been presented as a variable which gives extra important contribution on economic growth according to Salvatore and Hatcher (1991), where the exports increase the productivity and it has been considered as a factor because of the exploitation of the scale economies and the better exploitation of the capacities. Furthermore, it assures an approach to the international market and defines a high norm of the technological innovations.

The sign we expect for the connection of the FDI is positive and negative at the same time, but not zero. So, generally, we expect an effect of the FDI in the economic growth. Firstly, the connection of these two variables particularly might be positive, to support even the theoretical aspect that the FDI affect positively on the economic growth and vice versa. Like in this case, the independent variable is the economic growth and one of the independent variables are the foreign direct investments, and then we can say that FDIs contribute on economic growth, apart from the other factors. Secondly, the connection between the foreign direct investments with the economic growth might be negative. The main reason of this negative connection is the effect of the spillover and the time they need to turn up, but even the "domestic crowding out". The main reason of a negative sign of FDI with the economic growth is because in case there are foreign investments in a specific country, the domestic enterprises shrink for a period of time causing a decrease in economic growth. Furthermore, the negative sign of the FDI might depend on the kind of the data. Actually, the increase of the GDP, thus economic growth, might get positive and negative attributes, while FDI in the percentage of the GDP is a variable with positive values only, then a negative correlation might be settled between the two variables, particularly in connection to the first years of the data. So, it is important to mention the fact that this connection or regression risks to suffer from the correlation of the independent variables or otherwise of the determinant variables (which control the regression) with each other.

This study has been thought to be considered in three viewpoints; meanwhile the empirical analysis will be considered in only two. Firstly, there is the connection of economic growth with the foreign direct investments (on GDP) together with the other controlling factors. Secondly, the connection is considered using the time lag, particularly the foreign direct investments lag. The theory explains that generally the foreign direct investments have their effects on

economic growth of a country with a time lag not directly during the same year, so it is important to be considered this way. Thirdly, it would be of a special interest if we added other countries to the analysis of Albania, creating a panel-data, but as the countries (particularly the countries of Europe under transition) have a lot of difference among them, then we cannot give a reply about this connection. However, we can give an assessment for the sign of this relation: of economic growth and of foreign direct investments.

For the results it was used SPSS 17.0 Regression Analysis and data has been taken for all the dependable and independent variables from 1990 until 2012, so the observation number is 22. Having collected the data in an absolute value (million lek), they were divided with the respective GDP in million lek summed up by the Bank of Albania. Also, as the economic growth can be found only as an annual variable we have to consider the whole regression for the annual data and not for 6-month or 3-month data. The study has been considered in two viewpoints: the variables at the same period of time and the variables with time postponement of 1 lag. The reason for this division of the study is the delay in the display of the spillover effects, which are even one of the reasons for the negative effects of the connection between economic growth with the FDI on GDP.

3.2.2 The results of the study

Based on the suppositions and the limiting criteria of the model we may derive this model which has the highest global importance compared to the other models and the biggest determination coefficient, R^2. This model results are given in the following table.

3.2.2.1 Model 1

Table no.1: The assessment of economic growth connection to FDI and other indicators, without any lags.

Variables	Coefficients	Standard error
Fdi	11.657 (*)	0.130
Gcf	1.370 (**)	0.693
Nx	-0.788 (**)	0.0001
Constant	77.125	0.032
Observation number	22	
R^2	0.937	
Corrected R^2	0.924	

Actually, the results are predictable, particularly the connection of direct foreign investments with economic growth.

According to this model we can notice that R^2, the determination coefficient is 0.937, which is closer to 1 than to 0. So, the model we are studying is very important. This importance will be evident even when we study the respective equation and the variables.

These are the hypothesis to assess the importance of the model according to the table ANOVA:

H_0: The model is unimportant (all the coefficients are equal to zero)

H_a: The model is important (there is at least one coefficient which is different form 0)

According to the table Anova we can see that the observed F=KMR/KMG is 8.929 compared to the critical F with alpha 0.05 and the freedom scale k-l=3 and n-k=14 (where k is the variable number in the equation) in the table there is a certain value, it can be seen in the respective tables of the statistics).

If the observed F > the critical F, then H_0 falls down and the alternative hypothesis H_a remains. So the model is important and there is at least one coefficient in our equation which gives the right importance to the model.

Or another way is: we can see that sig is 0.001 < 0.05 which is alpha, then sig < alpha. This means that the hypothesis H_a is the right one; so the model is statistically important.

Based on this table which has appeared in SPSS upon our data, we have the equation:

Economic growth = a_0 + a_1 Nx + a_2 capital formation + a_3 IHD

Economic growth= 77.125 -0.788Nx + 1.370Capital_formation +11.657IHD

Via the table we may explain the importance of each variable and the constant, based on the given measures.

From the equation, we can explain:

If Nx, Capital formation (domestic investments) and the FDI are zero at a certain period of time, then we can see

that economic growth is 77.125, so there is an economic growth of 77.125 units.

If Nx increase by 1 unit and the capital formation together with the FDI do not change, then:

∂Economic growth = -0.788 units ∂Nx (because it becomes delta and the ones that do not change are eliminated)

Consequently, even economic growth would decrease with 0.788 units or 78.8%

If the capital formation increases by 1 unit and the other variables remain unchanged in a certain moment of time, then:

∂ Economic growth = 1.370 ∂Capital formation, so the economic growth would increase by 1.370 or 137%

If FDI would increase by 1 unit and the other variables would remain unchanged in a certain period of time, then:

∂Economic growth = 11.657 ∂FDI, so the economic growth would increase by 11.657 units.

These predictions are made based on the equation, now we will try to define which of the variables is important and which is not:

At first we set the hypothesis:

H_0: a_1 = 0 variable Nx is not important, or otherwise we say it is not explanatory for the variable economic growth.

H_a: $a_1 \neq 0$ variable Nx is important, or otherwise we say it is explanatory for the variable economic growth.

In the table we can see that 0.0001 (sig NX)<0.05 (alpha) than the hypothesis H_0 falls down and the alternative hypothesis remains, so the variable Nx is important for the model.

H_0: a_2 = 0 variable Capital formation (Gcf) is not important, otherwise we can say that it is not explanatory for the variable economic growth.

H_a: $a_2 \neq 0$ variable Capital formation (Gcf) is important, otherwise we can say that it is explanatory for the variable economic growth.

In the table we can see that 0.693>0.05, then the hypothesis H_0 remains, so the variable capital formation (domestic investments) is not important for our model.

H_0: a_3 = 0 variable FDI is not important; otherwise we can say it is not explanatory for the variable economic growth.

H_a: $a_3 \neq 0$ variable FDI is important; otherwise we can say that it is explanatory for the variable economic increase.

In the table we can see that 0.130>0.05, then the hypothesis H_0 remains, so the variable FDI is not important.

So, we can see that the important variable results to be only Nx and its importance is bigger than the importance of the two other variables and the models results to be important.

3.2.2.2 Model 2

Table no.2: The evaluation of the economic growth connection with FDI and other indicators. With 1 lag

Variables	Coefficients	Standard error
FDI	0.328	**0.318**
Gcf	0.201	**0.110**
Nx	0.107	**0.0118**
Constant	1.633	**1.187**
Observation number	22	
R^2	0.638	
Corrected R^2	**0.565**	

As the above model carried the problem that the variables did not have time distance and enough time to present their real problem, then at this point, we think to present the connection with one lag for the foreign direct investments. The other variables have not been taken with any lags as it is not in the interest of this study to consider such thing. Based on the results, we can say that all the variables had the predicted sign, positive, so their effects are positive and they are all considered to be positive contributors in economic growth. But what is really important in this case is the connection we get with foreign direct investments. More concretely, foreign direct investments affect economic growth of Albania positively, and if the foreign direct investments grow by 1point/percent and all the other variables do not change, then the effect given by FDI in economic growth is at the measure of 0.32 point/percent, for lag=1.

At this point we can see that R^2 or the determination coefficient is 0.638, so it is closer to 1 than to 0. As a result the model should be relatively important.

H_0: The model is not important (the coefficients are all equal to zero, $a_1=a_2=a_3=0$)

H_a: The model is important (there is at least one coefficient different from 0, there is one $a_i \neq 0$ for every i=1,2,3)

Based on the table Anova we get the importance or the unimportance of the model according to Fisher's criterion.

The observed F in this case is 8.808 and it is compared to the critical F with the freedom scale of 3 and 19 and alpha 0.05.

Sig is also given and it is 0.001 < 0.05. Then, our model results to be important because there is the alternative hypothesis H_a.

Now, we can have the equation:

Economic growth = $a_0 + a_1 Nx + a_2 gcf + a_3 fdi$

Economic growth = 1.633+ 0.107nx+0.201gcf+0.328fdi

We will see the importance of the variables via the hypothesis:

H_0: a_1=0 Nx variable is not important, or otherwise we say it is not explanatory for the variable economic growth.

H_a: $a_1 \neq 0$ Nx variable is important, or otherwise we say it is explanatory for the variable economic growth.

0.038<0.05 then the alternative hypothesis remains. So the variable Nx is important or explanatory for the variable economic growth.

H_0: a_2=0 gcf variable is not important, or otherwise we say it is not explanatory for the variable economic growth.

H_a: $a_2 \neq 0$ gcf variable is important, or otherwise we say it is explanatory for the variable economic growth.

0.088>0.05 then the hypothesis H_0 remains. So, the variable gcf is not important.

H_0: a_3=0 fdi variable is not important, or otherwise we say it is not explanatory for the variable economic growth.

H_a: $a_3 \neq 0$ fdi variable is important, or otherwise we say it is explanatory for the variable economic growth.

0.032<0.05 then the variable fdi is important because the hypothesis H_a remains.

Two variables are important and one is unimportant, so even the model is important.

4. Conclusions

- In the first model, where the connection between economic growth, foreign direct investments, capital formation and net export is analyzed, R^2, the determination coefficient is 0.937, which is closer to 1 than 0, as a result the model we are studying is important.

- With regard to the importance of the independent variables (net export, capital formation and foreign direct investment), we can see that Nx results to be the only important variable and its weight is bigger than the weight of the two other variables as the model results to be important.

- In the second model, where the connection among economic growth, foreign direct investments, capital formation and the net export is analyzed, the evaluation of the connection of economic growth with FDI (with 1 lag) and other indicators, we can see that R^2 or the determination coefficient is 0.638, so it is closer to 1 than 0, as a result the model should be relatively important.

- In connection to the importance of the independent variables (net export, capital formation and foreign direct investment), we can see that the important variables result to be Nx and FDI, while gcf results to be unimportant. So, in the case when FDIs are considered with one lag to see the effect on economic growth, it results that it is an important or explanatory variable.

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