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The Impact of FDI in Mining on Kosovo's Economic Growth

Alketa Bucaj

Senior Analyst for Fiscal Policy. Kosovo Ministry of Finance

Email: alketa.bucaj@gmail.com

Abstract

This paper focuses on the role of Foreign Direct Investment inflows in the Mining Sector to Kosovo's Economic Growth. Using the model from endogenous growth theories and using Ordinary Least Squares (OLS) as the methodical technique, the results suggest that FDI in mining has a positive and significant impact on GDP per capita which was used as a proxy for growth. This confirms the hypothesis that there is a positive relation between FDI in mining and growth. The coefficient for FDI in mining is positive but it is quite small suggesting a very minimal effect on GDP per capita, however it suggests that there is necessity to sustain and attract further FDI in order for the economy to benefit. Furthermore, the investment climate in the country is evaluated and policy measures are suggested in order to attain the goal of increasing FDI in the sector and increasing the benefits from FDI in mining to the rest of the economy. These suggestions include: introducing light screening mechanisms to FDI in the mining sector in order to regulate procedural technicalities and provide a more transparent reporting method; settling the status of existing mining sites that are under the Privatization Agency administration; create a "one-stop-shop" for all procedures related to establishing a new company, licensing and reporting in the Independent Commission on Mines and Minerals; and ,lowering export taxes for the mining companies that invest in processing plants in order to positively incentivize investment in processing plants that will localize FDI benefits.

Keywords: FDI, GDP Growth, Mining Sector

Introduction

The World Bank's Economic Memorandum (2004) for Kosovo identified three sectors in which the country could have a comparative advantage. The mining sector was seen as one of the key sectors with potential to contribute to Kosovo's economic growth, due to endowment with minerals. Almost twelve years after the World Bank Report of 2004, the European Commission published Kosovo's 2016 Report which identified that there has been little progress towards a well-functioning market. The country has been having persistent trade deficits which show that Kosovo still has a very weak production base. In addition, there is a lot of dependence on

remittances, low labour force participation, and high unemployment rates (European Commission, 2016).

Considering the identified potential of mining in 2004, there has been foreign investment over the last decade directed towards this sector. However, since economic growth in the country has not been as evident, this paper will explore the effects of FDI in mining to Kosovo's economy in general.

Foreign direct investment occurs when one company from one country invests in another country and that investment comprises a long-term relationship and control (OECD, 2008). More precisely, FDI is defined as capital flows of a foreign company that expands through a subsidiary in the host country; both through direct control and transference of resources (Mun et al., 2008). Many studies relate economic growth with factors such as Investment, both Domestic and Foreign Direct Investment (FDI). Mencinger (2003) in his study suggests that many international institutions, governments, and economic experts consider FDI as one of the most important factors that improves the economic growth of the host country. This because, FDI is thought to support the host country attain the investment level beyond its own existing capacity which will in turn improve GDP and economic growth. Commonly, FDI is seen as capital and technology transference that can impact the economy of the other country by introducing new work training, new managerial know-how, and new technology (De Mello, 1999). This impact nevertheless, it is debated to be different across different sectors of the economy (Alfaro, 2003).

Therefore, considering that there has been FDI directed to the mining sector of Kosovo but there has not been an evident improvement in the economy, this research will try to investigate the effect of FDI in this sector to economic growth.

Background on Kosovo's Economy

The country that will be used for this study is the Republic of Kosovo, a new state founded on February 17th, 2008, located in Southeast Europe, in the central part of the Balkan peninsula. The Republic of Kosovo is a developing country with a population of 1.82 million, unemployment rate of 32.9 %, and poverty rate 29.7% (UNDP, 2015). In the past sixteen years the country has been experiencing substantial economic growth. The column chart in Figure 1 shows the GDP trend in billion \$ for the past sixteen years.

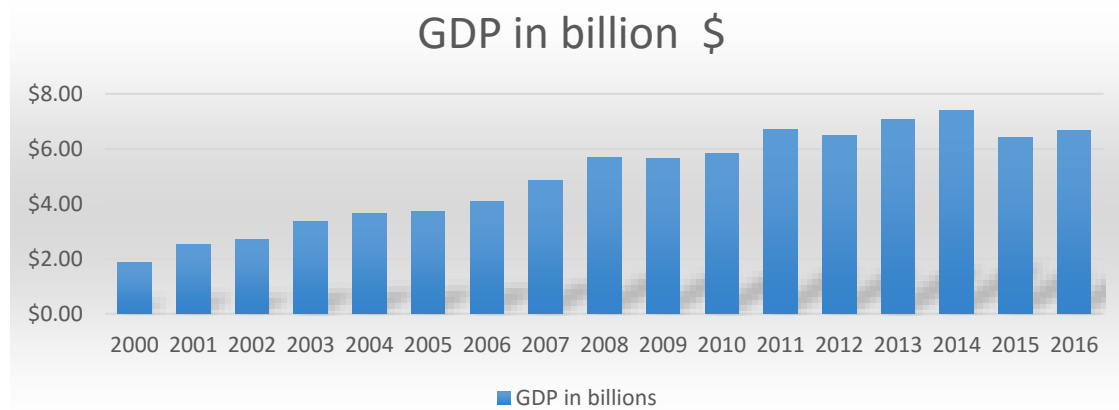


Figure 1: Kosovo's GDP in billion \$- World Bank Data

As it can be seen in the chart, GDP has been increasing in the last decade, but with the complexity of the political and economic situation, the causal economic components for this increase are unclear. There has been no prior research that explains the driving factors in the economy. Likewise, there has been no prior research that evaluates the impact of FDI in the economy of Kosovo.

With the presumption that FDI in the whole economy and this sector will have a positive impact, policy makers in the country have focused on creating favourable conditions for attracting foreign investment. According to the World Bank (2014)., "Kosovo is one of the most open countries to foreign equity ownership in Eastern Europe and Central Asia". The Law on Foreign Investments allows foreign investors to have access to equal entitlements as its citizens, based on the principle of national treatment.¹ In addition, based on the indicators of Investing Across Sectors, almost all sectors in Kosovo are open to foreign equity ownership. Similarly, the World Bank Doing Business Report in 2017, ranks Kosovo's economy as 60 out of 190 regarding the ease of doing business.²

Background on Kosovo's Mining and Quarrying Sector

Kosovo is a country known for its abundance of non-renewable natural resources, and is one of the richest countries in mineral deposits in Europe. Kosovo is the fifth country with most lignite reserves in the world, with around 10.9 billion tons of lignite reserves which could translate to 1,300 years of lignite supply (Olters, 2014). The country is also rich in other mineral deposits such as ferronickel, lead, zinc, magnetite, and others. The lead and zinc reserves being also ranked as the third in the world (Flounders, 1998). In year 2014, there was also a high grade gold discovery by one of the foreign companies in Kosovo (Bacal, 2014). It is therefore, known that there are enough opportunities for investment in this sector, and the country could benefit economically, especially when it comes to employment and exports.

¹ Law No. 04/L-220 <http://www.kuvendikosoves.org/common/docs/ligjet/04-L-220%20a.pdf>

² Doing Business Report 2017 <http://www.doingbusiness.org/data/exploreeconomies/kosovo>



Figure 2: CDM International (2000)

Kosovo has had economic and political fluctuations in the past twenty years. Historically, the mining sector has been the main pillar of the country's economy and one of the main economic drivers until the 1990's. Trepca Mining and Metallurgic Enterprise is the largest mining complex in the country, comprising of a number of mines, metallurgies and chemical processing companies. Currently only four of these mines operate at a limited capacity (Mines in Stanterg, Cernac, Belloberde, and Artana). In 1898, Trepca mines employed around seven thousand employees, and the entire corporation over twenty-two thousand employees.³ After the mines and the mining production industry was closed in 1990, there was an increase in unemployment rate. Today, the status of this enterprise is still complex and the enterprise itself is still under the administration of Kosovo Privatization Agency. Currently, only two thousand and five hundred people are employed and another two thousand and five hundred are supported by Kosovo's budget through low income schemes. All activities and assets of Trepca are suspended until the Special Chamber of the Supreme court permits any action.⁴ It was noted that the investment in the mining sector has declined greatly during the period after 1900. With the end of the conflict⁵ in year 2000, however, there was a great inflow of international donations and investment in the country, GDP as shown in Figure 1 started to increase and only in year 2000 the annual GDP growth was 26.9% (World Bank Data).

³ Ministry of Economic Development. Mining Strategy of the Republic of Kosovo 2012-2025 http://www.kuvendikosoves.org/common/docs/Strategjia_Minerare_e_R_Kosoves_2012_-_225_Ang.pdf

⁴ Ministry of Economic Development. Mining Strategy of the Republic of Kosovo 2012-2025

⁵ The War in Kosovo was an armed conflict lasting from March 5th 1998 until 11 June 1999. It was fought by the Federal Republic of Yugoslavia and the Kosovo Liberation Army, with support from (NATO) from March 24th 1999.

Based on the definition of FDI| presented in the previous section, the mining sector had inward horizontal FDI inflows, because the companies carried out the same mining related activities as in their home countries. The amount of investment in the sector will be used to generate a model that will explain the link between FDI and growth of the country.

When it comes to trade, during the last 16 years Kosovo has been facing a trade deficit, where imports have by far exceeded exports as shown in Figure 2.

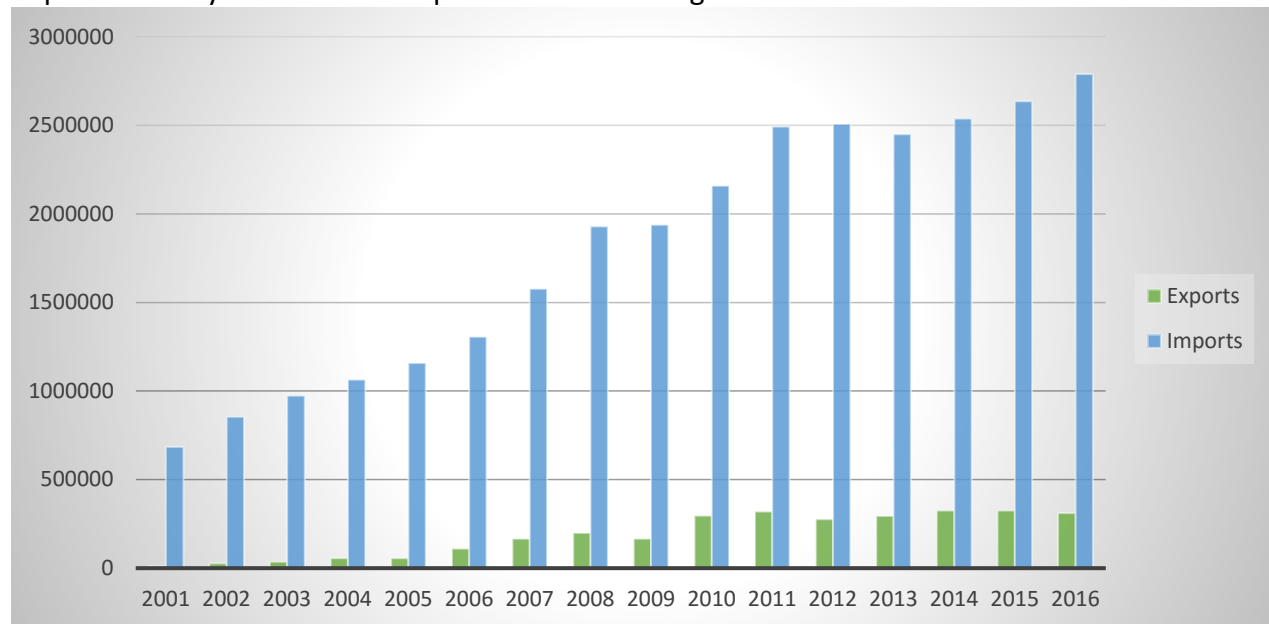


Figure 3 Source: Kosovo Agency of Statistics Database

However, even with the limited capacity of the mining industry, mineral products comprise around 40% of total exports, and base metals around 30% of total exports, thus, altogether the mining industry with its limited capacity contributes to around 70% of total exports (Kosovo Agency of Statistics). This indicates the significance of the sector for the country, also the need and potential for investment. The impact of FDI in the mining sector therefore, is the main point of this research considering the importance and richness of this sector in the country. The exact FDI inflow values per sector will be provided by the Central Bank of Kosovo. An econometric study will be conducted to see the link between FDI in mining and GDP. And the paper will also examine the current strategies and policies for the sector to see their effectiveness to attract investment. Historically, case studies show that such abundance of natural resources can turn out to be either be a blessing or a curse. The curse that could result from having excessive minerals, is that those minerals are being extracted from developing countries and being sold as unprocessed materials to developed countries for a very low price (Humphreys M, et al. 2007). Thus, the benefit for the developing countries is minimal and the resources are then depleted. However, it is believed that Kosovo's potential has been largely left intact, as investment in this sector has not been as massive. There are however, more than twenty foreign companies currently operating in the mining sector in Kosovo, and ICMM (Independent Commission for Mines and Minerals), between 2005 and 2017 has issued around 1221 licenses for exploration and mining.

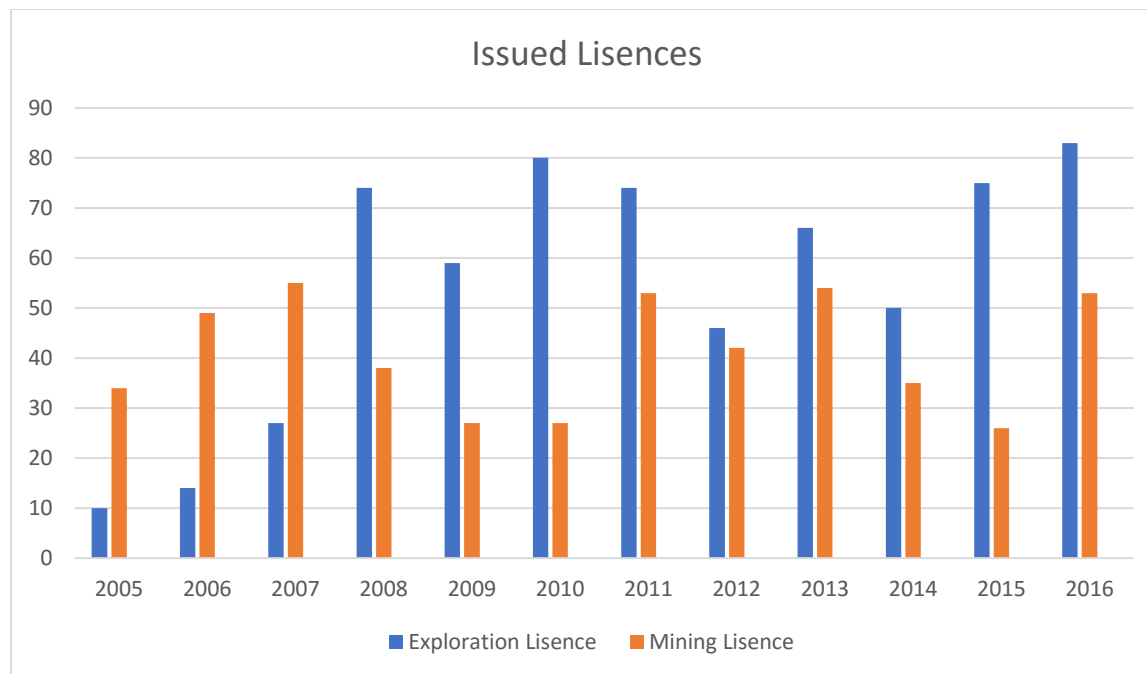


Figure 4 Source: Independent Commission on Mines and Minerals

Literature Review

Theoretically, FDI is assumed to influence economic growth through investment, integration of new inputs, and introduction of new technologies to the host country. It is stated that because international trade affects economic growth, everything else remaining equal, the GDP of the country will increase with an increase in trade (Martin, 1992). International trade therefore is influenced by FDI since it is assumed to contribute to an increase in exports due to increased competitiveness resulting from investment in technology. The export theory established by Martin (1992) states that exports have a great effect on the economy of a country and contribute to growth. One of the best ways for developing countries to increase exports is through FDI. FDI can help developing countries by providing their technology, know-how, and increasing trade flows.

Currently, with the process of globalization, international trade and FDI have become crucial to economic growth. Haddad and Harrison (1993) argue that FDI can fuel exports from the local market through linkages and spill-overs. In the mining industry specifically, they argue that there are backward linkages spurred by FDI such as buying domestic inputs in order to produce exports. FDI therefore, intends to affect the export supply of the host country. By improving the export performance of a country, they suggest that the country will increase its productivity which will further attract foreign investors and increase FDI, so there will be reverse causality that will create a cycle of increased FDI inflows and increased productivity (Haddad and Harrison,1993).

Porter's National Competitive Advantage Theory states that a country's competitiveness is dependable on the capacity of the industry to modernize and improve (1990). The theory suggests that economic development through attaining national competitiveness in one industry is therefore linked with FDI and international trade (Porter, 1990). Based on Porter's theory,

Ozawa (1992) suggests that an increase in trade comes as a result of a better comparative advantage which is partly caused by FDI. By investing in one sector in a country, that sector will be improved, be more productive and gain comparative advantage. When trade takes place based on comparative advantage, FDI would've helped the country to increase its relative competitiveness and thus increase its exports. Exports in most studies are seen as a proxy for economic growth, the more a country exports, the more money flows in the country that can then be used to finance investment and imports.

The Heckscher-Ohlin model is also used to show that FDI and trade are both influenced by different country endowments initially (Suranovic, 2007). However, after FDI and trade take place, the model states that factor prices will reach an equilibrium among countries through trade or through mobility of production factors. Factor mobility hence, may increase if there is investment and capital flows to the host country.

Theoretically, FDI is referred to as a means to directly impact growth through capital accumulation, integration of new inputs, and introduction of foreign technologies in the host country. Most theories state that FDI and growth are interlinked through the relation of FDI with trade.

In general, FDI inflows per specific sector are mainly influenced by the capacity of the that sector and the existing policies of the host country. Considering only the capacity of the mining sector in Kosovo, it is possible that FDI and growth can have a positive relationship. Whereas the economic policies will be evaluated based on the findings.

Empirical Literature

Empirically, different growth models have been broadly used to test the theoretical benefits of FDI. In theory, foreign direct investment is argued to have a very significant impact on the economic growth of developing countries. Policy makers often suggest that FDI can have a considerable positive spill-over effect on the host country's economic development. It is commonly considered that FDI impacts the host country's exports, leading to a positive rise in production and further increases in FDI inflows. Eventually, this rise in exports adds to total production and economic growth of that country. Furthermore, FDI can present positive spill-overs to the host country's economy such as know-how, technology, and labour training. These spill-overs contribute to the improvement of the economy of the host country.

In support of these theories, Caves' (1974) study in Australia and Canada showed that FDI spill-overs contributed positively to the economy. He states that the host country does not benefit because the multinational company is being efficient or it has brought skilled entrepreneurs. Instead, the host country's benefits depend on the spill-overs produced when the foreign investor cannot take all quasi-rents. Kokko' (1994) similar study also showed that FDI spill-overs had a positive impact in Mexico's overall economy.

Martin's (1992) export theory was also supported in the econometric study by Graham and Wada (2001) which studied the impact of FDI on growth of China was examined. The study concluded that, FDI contributed positively to growth by increasing exports. In the regions where most FDI took place, total factor productivity also increased higher than the rest of the regions of China. Another study conducted by Aloysius (2003) resulted in a positive FDI and growth relationship in

Cameroon. Aloysius discovered that FDI contributed to higher capacity in the host country and spill-overs, influencing an increase in exports as a proxy for growth.

Most researchers studied the overall effect of FDI in the economy of the host country, however there are also a few who focused on specific industries and the effect of FDI in those industries. Mungunzul and Chang (2015) found that FDI inflows have a positive effect on Mongolia's economic growth. The mining industry displayed to be the key factor of economic development especially during the mining boom 2011-2015. FDI in Mongolia contributed to a great increase in exports, an annual increase of 7% in employment rates, and only in years 2011-2012 during the mining boom, tax revenues were around 2 billion or 48 percent of total tax revenue per year (Mungunzul and Chang, 2015). A similar study conducted by Oxford Policy Management (2013) concluded that FDI inflows in the mining sector in the Democratic Republic of Congo has been one of the core economic drivers in the economy. Where, the mining sector accounts for around 12% of GDP. All of the investment in plants, equipment in the mining industry and mining accounts for 90% of total FDI, and 75% of total exports of the country (Oxford Policy Management, 2013). Similarly, George Awudi (2002) also argues that the FDI inflows in mining sector had a positive economic impact in Ghana. The mining sector in Ghana is one of the largest foreign exchange earner with around 41% of the total foreign exchange earnings (Awudi, 2002). However, the impact of FDI has been a key topic of study by a lot of researchers. A study by Jeon (1992) based on several cross-country data determined that there was a negative relationship between FDI and exports. Whereas Sharma (2000) study in India concluded that there was no statistically significant impact of FDI on Indian exports. Some of the explanations were that the FDI effect varies between countries since it is influenced by other characteristics of the specific country such as employment rates, inflation rates, political stability, regulations etc. Therefore, he concluded that FDI does not automatically always lead to a positive economic growth for a country (Sharma, 2000). Studies of Borensztein et al. (1998), and Alfaro et al. (2003) also suggest that other elements affect the scale of FDI impact in the host country, such factors being the educational level, human capital, and other aspects that play a significant role in the economic growth of a country. Borensztein et al. (1998) in a regression model with data for 69 developing countries, found that FDI has a positive impact on growth when the foreign investors interact with human capital. When this was the case, FDI contributed more to the growth of the country than domestic investment. Furthermore, FDI in such countries contributed to an increase in domestic investment. Therefore, they concluded that human capital is a sensitive part that needs to be included in growth models. Similarly, Li and Liu (2005) with their study for 84 countries during 1970-99 also came to conclude that FDI affects growth when it interacts with human capital.

A study including data for 18 Latin American countries conducted by Bengoa & Sanchez-Robles (2003) suggested that in order for one country to benefit from FDI, that country should be economically stable and have open markets. Both the human capital market and the financial market of the country need to be liberalized in order for FDI to have a positive effect. Therefore, openness is a key variable in order for FDI to provide benefits for the host country.

When it comes to studying specific sectors and the effect of FDI, Ilboudo (2014) studied the effect of FDI and the total factor productivity in the mining sector in Chile. He concluded that FDI had a positive and significant effect on the country's total factor productivity. Another study conducted by Rutaihwa and Simwela (2012) examined FDI in the mining sector and its impact on exports in

Tanzania by using OLS techniques and the result showed that FDI in the mining sector has been exerting negative pressure on the country's exports. The relationship between FDI in the mining sector and exports was positive but statistically insignificant, even though mining sector in Tanzania has been one of the biggest sources of FDI inflows (Rutaiwa and Simwela, 2012). The authors concluded that the results imply only a short term insignificant relationship between FDI and exports, thus Tanzania should continue attracting FDI in the mining sector since the benefits will accrue in time. Several policy measures were then introduced in order to help Tanzania increase the FDI inflows in the sector and regulate the sector so that the benefits from FDI are localized.

The impact of FDI was also found to differ between developed and developing countries. Blomstrom, Lipsey, and Zejan, (1994) in a study of 78 countries concluded that FDI has a positive effect on growth in higher income countries, and a negative effect in lower income countries. Possible reasons for this were that the technology gap plays a great role when it comes to maximizing spill-overs. Kokko (1994) also came to a similar conclusion where he suggested that in countries with large technology gaps, spill-overs are less likely to happen. A different study that used annual cross-sectional data from 46 developing countries found that the economic policies of the country affect the influence of FDI. They found that the FDI impact is positive in countries that promote export but negative in those who promote import substitution policies (Balasubramanyam, Salisu, & Sapsford, 1996). They test Bhagwati's hypothesis that trade policies affect both the amount of FDI and its efficiency in promoting growth. Their results support the hypothesis since they conclude that export oriented countries tend to have higher FDI benefits and inflows.

Most of the studies aforementioned concluded a one-way causality between FDI and growth, meaning that FDI causes growth. A study conducted by Ekanayake, Vogel and Veeramacheni (2003) concluded a positive and significant reverse causality relationship between FDI and exports. Meaning that one causes the other, but the other causes the first one as well. Balamoune-Lutz (2004), and Paecho- Lopez (2005) conducted similar studies and also found reverse causality between FDI and growth.

Most of the observed studies conducted on FDI and growth come to different conclusion. One possible explanation that researchers argue for these differences in FDI impacts, is that the positive impact of FDI varies between sectors. Even though, it is common to believe that FDI might have a positive impact the economic growth of the host country, such effects might be different between different sectors. UNCTAD World Investment Report (2001) argues that in the primary sector, particularly the mining sector and agriculture, the possibility for positive impact is more restricted. FDI benefits that come from spill-overs such as labour training, technology transfer, or managerial know-how tend to be more related to the manufacturing sector and the service sector (Findlay, 1978). Hence, most of the FDI is directed towards these sectors. Not all areas of the economy can have the same absorbing capacity to connect the benefits of FDI to the rest of the economy (Wang and Bloomstrom, 1992). Thus, such low linkages limit the positive effect FDI can have in an economy. It is argued that these low linkages of FDI in the primary sector and positive economic growth come due to this ability of primary products from mines, wells, and plantations to slip out of a country without leaving much of a trace in the rest of the economy (Hirschman, p.110, 1958). This suggests, that foreign investors without the proper legislature and operation specification can engage in extractive actions and not help the overall economy. These

sectors are more prone to extractive actions since companies engage in exports of unprocessed cheap materials instead of investing in processing plants in the host country. Therefore, these exports of unprocessed minerals and goods leave the country without benefiting the host country as much as they should have. With those cheap exports the countries then cannot finance processed and more expensive imports. Hence, the negative FDI impact on growth.

Likewise, Alfaro's (2003) study using 47 countries in the sample also suggests that FDI inflows into different sectors of the economy result in different effects on economic growth. FDI inflows in the primary sector had negative effect on growth mainly because investment in this sectors, namely agriculture and mining, have slight spill-over effect for the host economy, suggesting that not all FDI can be positive for a country (Alfaro, 2003)

Kentor (1998) found that another factor that contributes to growth is the dependence on foreign capital. Countries with a high reliance on foreign capital have a much slower economic growth than countries that are less reliable or dependent on foreign capital. Findings of Dixon & Boswell (1996) also argued that FDI does have an initial positive effect on the economy of a country, but in the long run when the country becomes dependent on foreign investment it starts to exert negative pressure on the economy. Reasons for this phenomenon presented in this study were that once foreign investors develop infrastructure and institutions they further attract FDI, this increase in FDI creates over-urbanization and income gap that negatively influence growth.

The studies reviewed, present different conclusions on the relationship between FDI and growth. Some of the studies found that there was a positive causal effect between the two, others concluded an insignificant relationship, and some a negative relationship.

Summary of the Empirical Review and Gaps

In general, the studies reviewed suggest that FDI can have either a positive or negative growth effect on the host country. Besides the trade policies of a country and the technology gap, one of the most evident determinant of the effect of FDI seemed to be the sector in which investment took place. The primary sector in general was characterized with insignificant or even negative effect. Whereas, the manufacturing sector was considered to be one where FDI has positive impact. Explanations for this occurrence were that FDI mainly contributes to growth through spill-overs, labour training, and technology transferal. The primary sector therefore has a rather limited absorption capacity for these spill-overs. The mining sector in particular may have limited spill-overs, especially in initial years because most of the investment is directed to exploration and extractive actions instead of investment in processing plants.

Whereas the other factors that may influence the impact of FDI are the policies of the country. Differences are seen between countries that are open to trade and investment, and countries who aren't. Export oriented countries tend to have higher benefits from FDI than Import Substitution countries. This can be related to the fact that such countries implement policies and laws that create favourable conditions for foreign investors and therefore attract investment. Similarly, countries that have the right policy measures that direct the actions of the investors towards their country's wellbeing in the long run benefit more from FDI than countries who do not have these regulations intact. This, emphasizes the importance that countries need to place on creating appropriate economic policies in order for FDI to have the desired positive effect.

Some of the gaps of the studies reviewed come from the fact the most of the studies investigate the overall effect of total FDI in the economy, without differentiating between sectors. The

mining sector in particular is not one that is studied extensively. There are only a few researchers that test the effect of FDI in the mining sector on the economic growth of the country, and the results vary. Furthermore, the cross-country studies do not fully explain the reasons for the outlier cases in their results. Such cases need to be further examined in individual country basis in order to examine and find the links of country specific features that relate to the results.

Theoretical Model

The methodology involves estimating an econometric model which will investigate the impact of FDI in the mining sector on growth. A simple production function is used, but it is modified with some slightly different variables. The model is based on the study conducted by Athukorala (2003)'s study and Aga (2014)'s study.

The basic model formula is; $Y = f(A, FDI, K)$ Where Y is output, in our case Gross Domestic Product (GDP), and K is capital stock. The variable A shows the total factor productivity of growth in output which does not come from an increase in factor inputs such as K and FDI . L labour is not included in the model since the Republic of Kosovo is a labour surplus economy. Ranis(2012) describes some developing countries that have abundant unskilled labour as labour surplus economies. Athukorala (2003) as well drops L from his model's formula since Sri Lanka is also a labour surplus economy, thus he concludes that it is not an explanatory variable that affects GDP or FDI.

Trade liberalization is a variable that is derived through total exports and imports in the economy and is denoted with (TL). It is used as a proxy for openness as a key characteristic that determines the effectiveness and presence of FDI in a country.

For K as the capital stock, as a proxy it used gross fixed domestic investment which is also described as Domestic Investment (DIN). These variables then give us the following formula:

$$Y = f(FDI, DIN, TL)$$

$$GDP = C FDI DIN TL$$

Since we are interested in the effect of FDI in the mining industry, the model is adjusted to:

$$GDP = C FDIM DIN TL$$

Where

C = Constant

GDP = Gross Domestic Product per capita

$FDIM$ = Foreign Direct Investment in Mining (as percentage of GDP)

DIN = (Domestic Investment) Gross Fixed Capital Formation

TL = Trade liberalization (Total Exports+ Total Imports)

The econometric methodology that will be used is ordinary least squared (OLS) regression analysis using the aforementioned variables.

$$Y = f(FDIM, TL, DIN) \text{ or } GDP = f(FDIM, TL, DIN)$$

The analysis will check if the variables are stationary, correlated, significant, and what is their impact on the dependent variable GDP. Due to data limitations in this country, the data which will be used in quarters is for the period 2010-2016.

To reduce the variation in the variables that will be used in the model generated, the logarithm form will be used (Rutaiwa and Simwela, 2012). The logarithm form is thought to make the sum of the squares smaller and reduce the variation. The same method used by Rutaiwa and

Simwela (2012) is used, therefore the unit root test and the OLS will be using the log form of variables.

The generated log model of the variables is therefore:

$$\log\text{GDP} = \beta_0 + \beta_1 \log\text{FDIM} + \beta_2 \log\text{DIN} + \beta_3 \log\text{TL} + c$$

LOGGDP is the proxy used for growth. β_0 is the constant term which in the regression table is denoted by letter C; β_1 to β_3 show the effect of the independent variables in the period examined, and μ denotes the regression residual.

Hypothesis

The Hypothesis that will be tested in the study is:

- FDI in mining and GDP have a positive relationship.

Data Sources and Results

Data Sources

The research will be based on secondary data and will be derived from the following institutions' published data:

- The Central Bank of Kosovo
- The Independent Commission on Mines and Minerals of Kosovo Agency of Statistics
- The World Bank

In line with comparable studies reviewed on FDI and economic growth, this study will use a linear regression method in order to determine the impact and relationship of Foreign Direct Investment has on Kosovo 's economic growth. More specifically it examines the Foreign Direct Investment in the mining sector and economic growth, together with variables like gross capital formation and trade liberalization. The statistical methods used are Ordinary Least Squares Method (OLS) and Unit Root Test.

Results

The data were in the form of time series and on quarterly basis. Normality, Heteroscedasticity, Stationarity and Autocorrelation tests were conducted. The tests conducted showed that the model had no issues with normality, heteroscedasticity, or autocorrelation. The stationarity test will be described in the next section. The overall Regression model showed that 80.43% of the variance in GDP was explained by the independent variables.

Variable Description

	Description	Variable Name in EViews	Expected effect on Growth
Growth (dependent variable)	GDP per capita as proxy Economic Growth	GDP (LOGGDP)	
Capital (independent variable)	Gross Fixed Capital Formation (Domestic Investment)	DIN (LOGDIN)	+/-
Openness (independent variable)	Trade Liberalization (Exports+Imports)	TL (LOGTL)	+/-
FDI in Mining (independent variable)	Foreign Investment in Mining Industry (% of GDP)	FDIM (LOGFDIM)	+/-

*Table 1: Source Own computation***Unit Root Test**

The first test for times series is the test for stationarity and the order of integration. In reality most time series economic variables tend to be non-stationary or have a unit root. Non-Stationarity in time series data may lead to biased regression results. Therefore, it needs to be tested, and the data needs to be adjusted. For time series model to work properly, there is a need to test the order of integration of each one of the variables used. This is done in order to establish if the variables are non-stationary, and how many times do the variables need to be differenced in order to become stationary (Johansen,1998). For these types of studies, the Augmented Dickey- Fuller (ADF) test is one of the most commonly used in order to test for the unit-root in time series data. However, this test tends to be more parametric. Therefore, this study will use Philip- Perron test which is a non-parameter test (Philips, 1987). The P-P test changes the t-statistic in order to remove autocorrelation in the model. More specifically, it is a method that controls serial correlation. It estimates the Augmented Dickey Fuller test equation but also modifies the t-ratio of the coefficient in order for any correlation to not affect the distribution of the t- statistic (Perron, 1989).

Two unit-root tests were conducted, one with the original values for the variables and one with the log form of variables. If time series variables are non-stationary at their level form, then they need to be differenced until they are stationary. As shown in Table 3. all the variables in their actual form showed to be stationary at level, meaning that the variables did not have a unit root. Similarly, as seen in Table 4. all the variables in their log form also showed to be stationary at level, meaning that the variables did not have a unit root. Therefore, the null hypothesis of a unit root was rejected and differencing and co-integration tests were not needed.

Variable	PP- Test Statistic	Probability*	Order of Integration
GDP	-3.705199	0.0009*	L (0)
FDIM	-3.269528	0.0267**	L (0)
DIN	-5.628929	0.0001*	L (0)
TL	-4.816903	0.0006*	L (0)

Table 3: Source Own computation from EViews

Null Hypothesis: Variable has a unit root

Bandwidth: (Newey-West automatic) using Bartlett Kernel

Probability to reject the null hypothesis

*= significance at 1 percent level

**= significance at 5 percent level

Variable	PP- Test Statistic	Probability*	Order of Integration
LOGGDP	-3.9944600	0.0050*	L (0)
LOGFDIM	-3.165641	0.0335**	L (0)
LOGDIN	-6.852488	0.0000*	L (0)
LOGTL	-4.860847	0.0006*	L (0)

Table 4: Source Own computation from EViews

Null Hypothesis: Variable has a unit root

Bandwidth: (Newey-West automatic) using Bartlett Kernel

Probability to reject the null hypothesis

*= significance at 1 percent level

**= significance at 5 percent level

Ordinary Least Square Regression

The reason why Ordinary Least Square Regression is used is to minimize the sum of squared estimate errors that are present in a multiple regression model. All the essential assumptions of Linear Regression were tested and met before carrying out the analysis. Even though both the logarithm form and the actual values of the variables were stationary at level, in order to reduce the variation in the variables that will be used in the model generated, logarithm form will be used (Rutaiwa and Simwela, 2012), (Athukorala, 2003). The generated log model of the variables is therefore:

$$\text{LOGGDP} = \beta_0 + \beta_1 \text{LOGFDIM} + \beta_2 \text{LOGDIN} + \beta_3 \text{LOGTL} + \mu$$

LOGGDP is the proxy used for growth. β_0 is the constant term which in the regression table is denoted by letter C; β_1 to β_3 show the effect of the independent variables in the period examined.

Variable	Coefficient	Std. Error	T-statistic	Prob.
C	1.003004	0.198354	5.056626	0.0000*
LOGFDIM	0.005539	0.002529	2.190053	0.0385**
LOGDIN	0.246119	0.106564	2.309583	0.0298**
LOGTL	0.408892	0.093342	4.380567	0.0002*
R-squared	0.826083			
Adjusted R-squared	0.804343			
Prob(F-statistic)	0.000000			
Number of Observations	28			
Durbin-Watson statistic	1.589299			

Table 5: Source Own computation from EViews and SPSS

Null Hypothesis: Variable has no explanatory power

Probability to reject the null hypothesis

*= significance at 1 percent level

**= significance at 5 percent level

The following equation is established by the OLS regression and it explains the relationship between GDP and the independent variables.

$$\text{LOGGDP} = 1.003004 + 0.005539 \text{ LOGFDIM} + 0.246119 \text{ LOGDIN} + 0.408892 \text{ LOGTL}$$

When looking at the probability or the p-value on the table, all the independent variables show to be significant at a 5% significance level.

The results from the OLS analysis suggest that FDI in Mining (LOGFDIM), Domestic Investment (LOGDIN), and Trade Liberalization (LOGTL) have a positive and significant effect on the economic growth (GDP) of Kosovo.

Analysis of the Results

The results of the chosen model show that the model is acceptable for the study and the Adjusted R-squared is 0.8043 which implies that 80.43% of the factors affecting Kosovo's GDP growth for the period analysed are explained by the model. The remaining 19.57% is explained by other variables that are not part of the model. In addition, the model specification is significant at 1% level since as shown in Table 5, the probability of the F-statistics 0.0000, therefore the probability of rejecting the model is 0%. There is also no indication of serious autocorrelation issues since the Durbin-Watson statistic seen in Table is 1.589 which is within the acceptable range with 5% significance (Lower Limit 1.18 and Upper Limit 1.65).⁶

When looking at the probability or the p-value in Figure 8 all the independent variables show to be significant at a 5% significance level. According to the table, the coefficient of FDIM is 0.005539, which suggests that ceteris paribus, 1% increase in FDI would result in 0.0056% increase in the GDP of Kosovo; implying a positive and significant relationship between FDI in mining and GDP. The positive coefficient indicates that the more FDI invested in the Mining and Quarrying sector the more the economy of Kosovo will grow. This confirms the findings by Mungunzul and Chang (2015) who found a positive impact of FDI on economic growth, where the mining industry showed to be the main factor influencing growth. Similarly, the study conducted by Oxford Policy Management (2013) also suggests that FDI inflows in the mining sector in the Democratic Republic of Congo has been one of the most significant economic drivers in the country and made mining and quarrying account for 12% of GDP. The finding from our model is also consistent with the theoretical framework presented, where FDI shows a positive impact on economic growth of host countries.

When it comes to Domestic Investment or Gross Capital Formation the coefficient is 0.246119 and the p-value suggests that there is a positive relationship between DIN and GDP. This positive

⁶ Durbin Watson Significance Tables. Durbin-Watson Statistic: 5 Per Cent Significance Points of dL and dU https://www3.nd.edu/~wevans1/econ30331/Durbin_Watson_tables.pdf

significant relationship between domestic investment and growth is also supported by Athukorala's study (2003), whose model was adopted for this study.

The coefficient of Trade Liberalization (TL) is 0.408892, and its p-value indicates that there is a positive and significant relationship between TL and GDP. Trade Liberalization is used as a proxy for openness, this positive and significant relationship is also supported by Athukorala's (2003) study in Sri Lanka who finds a positive relation between TL and GDP. Furthermore, Balasubramanyam, Salisu, and Sapsford (1996) conclude that countries who have an open economy, and open trade policies tend to have positive effects on growth. These policies also affect the effect FDI, by improving its benefits on the whole economy.

This paper has examined the relationship between FDI in the mining sector and GDP using time series data from Kosovo. When it comes to the primary sector, literature review suggests that the possibility for positive impact of FDI is rather low. Hirschman (1958) explains that this comes because of low linkages of FDI in the primary sector since usually primary products from mines or plantations tend to exit out of a country without leaving much of an effect in the rest of the economy. Other studies on the other hand, find a positive relationship between FDI in mining and growth. Similarly, this study as well suggests a positive and significant relationship on economic growth. Even though, the impact of FDI in growth seems to be very small on GDP about 0.0056%, it is positive and thus it can be improved. This positive relation reinforces the need for Kosovo to continue attracting new FDI and sustain the existing FDI.

Investment Climate in Kosovo

The Republic of Kosovo has an opened economy that supports trade and investment, and has abundant work force and resources. The Kosovo Law on Foreign Investments in Article 4⁷ on Discrimination, enables foreign investors to have the same rights and treatment regardless of their citizenship, based on the principle of national treatment. And based on the indicators of Investing Across Sectors, almost all sectors in Kosovo are open to foreign equity ownership. Furthermore, some of the key indexes for investment and doing business presented in Table 6, show that Kosovo has a good investment climate open to FDI.

	Kosovo	Sub-Saharan Africa	United States	Germany
Index of Transaction Transparency ⁸	6.0	5.0	7.0	5.0
Index of Manager's Responsibility ⁹	6.0	4.0	9.0	5.0
Index of Shareholders' Power ¹⁰	10.0	5.0	4.0	8.0
Index of Investor Protection ¹¹	5.8	4.3	6.5	6.0

Table 6: Source: Doing Business Report 2016

⁷ Law No. 04/L-220 <http://www.kuvendikosoves.org/common/docs/ligjet/04-L-220%20a.pdf>

⁸ The Higher the Index, the More Transparent the Conditions of Transactions.

⁹ The Higher the Index, the More the Manager is Responsible

¹⁰ The Higher the Index, the easier for shareholders to take legal action

¹¹ The Higher the Index, the higher the investor protection

Issues with FDI Trends

However, even though most indicators suggest the investment climate in Kosovo has improved, FDI inflows in the country, including the mining sector have been in the decline. The Republic of Kosovo has one of the richest mining sector in Europe with a lot of capacity, and the Ordinary Least Square regression results show that FDI has been significantly and positively contributing to growth. However, there has been a declining trend in overall FDI inflows following year 2007 (Figure 5).

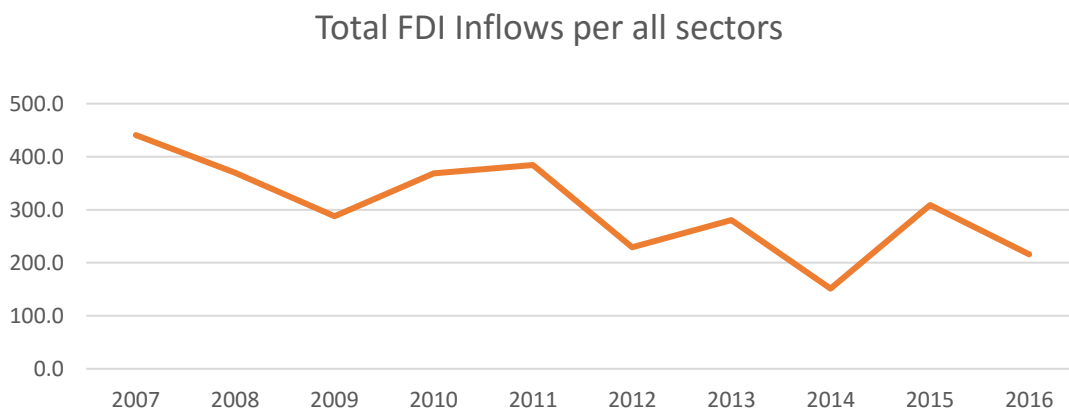


Figure 5: Source: Central Bank of Kosovo

Despite this decrease in FDI inflows, FDI in mining has a positive relation with GDP, hence there is a need to sustain and attract new FDI. The decreasing trend of overall FDI in the country might suggest that the investment climate may have not improved as a result of policy implementation issues, or the response from the investors has not been very encouraging.

Policy Suggestions

Screening Mechanisms

There is an evident need to maintain FDI inflows and attract new FDI. To accelerate growth in the sector one of the interventions is to review and implement a Mining Policy of Kosovo under Kosovo's Mining Strategy 2012-2025 (Ministry of Economic Development, 2012)

Currently, in Kosovo there is no law that requires for FDI screening, meaning that no foreign company needs to be screened, reviewed, or approved (US Department of State, 2016). Countries like Canada, Japan, USA, Australia do operate through screening mechanisms. Despite being considered a restrictive measure towards FDI, screening does not have much effect on the overall scoring of restrictive measures (Golub, 2003). Furthermore, most countries differentiate their screening mechanisms per sector. Golub (2003) in his study finds that the manufacturing sector, construction, and hotels and restaurants are usually very lightly restricted. Whereas more sensitive sectors such as mining, telecom, and electricity are more highly restricted. In the case of Kosovo, this absence of screening might contribute to the lack of transparent procedures, thus instead of attracting and protecting Foreign Investors, it provides room for uncertainty, and fear of corruption. Thus, one policy measure suggested is to include light screening mechanisms to FDI in the mining sector in order to regulate procedural technicalities and provide a more

transparent reporting method. This would enable more predictability in the government procedures when it comes to registering new business, reporting, and resolving business issues.

Completion of Legal Framework and the Creation of ‘One Stop Shop’

Most importantly, in order to attract and sustain foreign investment, the country should provide a transparent and appropriate regulatory framework. Currently, all activities related to mining and quarrying are regulated through the Ministry of Economic Development, and the Independent Commission on Mines and Minerals. However, some of the largest mining sites such as ‘Trepca’ enterprise are still under the Kosovo Privatization Agency administration and their status has not yet been settled by the Special Chamber of the Supreme Court.¹² Therefore, the importance of completing the legal framework, settling the status and procedures of all mining sites in the country is very high. Once the status of the existing mining sites has been established, investors can then be incentivized to invest. Therefore, there is a clear need for the Special Chamber of the Special Court to resolve the status of the mining sites in the country, in order for investment to increase. In Zambia for instance, following the privatization of the ZCCM (Zambia Consolidated Copper Mines), in year 2000, over 50% of total FDI inflows were directed to the mining sector. (Craig, 2001). Therefore, settling the status of the mines in Kosovo could help attract FDI and increase FDI inflows.

Furthermore, in order to reduce the uncertainties and procedural issues, a “one-stop-shop” for all procedures related to establishing a new company, licensing and reporting should be created in the Independent Commission on Mines and Minerals. This would help foreign investors in their decision making by alleviating the completion of technical formalities. It is also assumed that it will attract further FDI in the sector due to clearer procedures when it comes to investing and operating.

Export Policy Measures

Once the first two suggestions are completed, the country needs to focus on increasing spill-overs and benefits from FDI to the rest of the economy. The importance of FDI is very high for a developing country who lacks the necessary technology to process its resources. Therefore, the investment climate must be improved through appropriate measures such as more transparency in the trade policy, a regulatory framework for FDI companies, and policies that support and incentivize exports. Martin’s (1992) export theory states that exports have a great effect on the economy of a country and one of the best ways to increase exports is through FDI. Hence this interlink between FDI and exports should be used in order to optimize the benefits in the country. Figure 2, showed that in the last 16 years Kosovo has been facing a trade deficit, where imports have by far exceeded exports. However, even with the limited capacity of the mining industry, mineral products comprise around 40% of total exports, and base metals around 30% of total exports, thus, altogether the mining industry with its limited capacity contributes to around 70%

¹² Article 50 of the Law on Reorganization of Certain Enterprises and their Assets, No. 04/L-035, of 26 October 2011.

of total exports (Central Bank of Kosovo). Nunnenkamp (2002) suggests that it is very hard to determine whether a causal link between FDI and growth exists when FDI takes place in the natural resource sector. This because of low linkages to the rest of the economy and resource seeking activities.

However, this study found a positive link between FDI in mining sector and growth despite very new and not very high levels of FDI inflows. In order for the economy to further benefit and attract more FDI, one policy suggestion is to facilitate exports of final products made of minerals rather than focusing on exporting unprocessed minerals. In this way, FDI benefits would expand through technology spillovers and increase in exports. These both, would then contribute to a higher GDP and strengthen the FDI impact on growth. Studies of Graham and Wada (2001), Aloysius (2003), and Mungunzul and Chang (2015) show that FDI contributed to a significant increase in the exports of their countries. Furthermore, Balasubramanyam, Salisu, & Sapsford (1996) found that countries that promote exports have a more significant positive impact of FDI. Therefore, in order for the mining sector to grow through exports, incentives for processing mineral products need to be presented. Tanzania in 2017 issued a law that bans all exports of unprocessed gold and copper due to accusations that multinational companies have undervalued these resources in their trade abroad (Martinez and Cape, 2017). Indonesia as well, in 2009 has passed a law that requires certain raw minerals to be processed within the country before being exported abroad (State Gazette, 2012). Other countries that are abundant in natural resources such as the Philippines, Kenya and Zambia have also issued similar policy measures that incentivize local value added activities. Meaning, investing in processes that improve the value of mineral products by cleaning those minerals and removing worthless materials, which would then produce higher valued products. These policies require for the processing to occur within the country where the minerals are extracted in order to increase and localize the benefits of mining.

There has been a trend of governments trying to maximize the benefits from their natural resources through policies that require in-country processing before selling the products. There are various ways governments do this starting from export restrictions on unprocessed minerals, to increasing export tariffs on unprocessed minerals.

This can help increase FDI spill-overs through helping local downstream industries and increase the share of profits for the country through processed and refined materials. These policies come as a result of historically extractive unregulated activities carried out by foreign investors that help host countries depleted without much benefits. The lack of restrictive policies allowed for companies to export unprocessed minerals and their value being earned abroad. These measures are seen as an improvement on trade which also helps host countries to benefit and grow economically. Such value added mining policies adopted by Botswana for example, has contributed to an average growth rate of 7% during the last 20 years and lower unemployment rates (Lewin, 2011). These protective policies, can help the mining sector create linkages to the rest of the economy and create new jobs. Therefore, the policy suggestion for Kosovo in order to positively incentivize the creation of processing plants in the country, is to lower export taxes for the mining companies that invest in processing plants.

Conclusion

In conclusion, this study found a positive relation between FDI in the mining sector and economic growth in Kosovo from OLS analysis. It also suggested that the country should revise its policies in order to attract further FDI and increase the benefits of FDI to the rest of the economy. In order to achieve these, a few policy measures were proposed which are in line with initiatives taken by other resource abundant countries. These suggestions included; introducing light screening mechanisms to FDI in the mining sector in order to regulate procedural technicalities and provide a more transparent reporting method; settling the status of existing mining sites that are under the KPA administration; create a “one-stop-shop” for all procedures related to establishing a new company, licensing and reporting in the Independent Commission on Mines and Minerals; and , lowering export taxes for the mining companies that invest in processing plants in order to positively incentivize investment in processing plants that will localize FDI benefits.

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Appendix:

Correlations

		DIN	FDIM	TL	GDPCAPITA
DIN	Pearson Correlation	1	-.111	.671	.750
	Sig. (2-tailed)		.574	.390	.420
	N	28	28	28	28
FDIM	Pearson Correlation	-.111	1	-.165	-.313
	Sig. (2-tailed)	.574		.400	.105
	N	28	28	28	28
TL	Pearson Correlation	.671	-.165	1	.843
	Sig. (2-tailed)	.390	.400		.758
	N	28	28	28	28
GDPCAPITA	Pearson Correlation	.750	-.313	.843	1
	Sig. (2-tailed)	.420	.105	.758	
	N	28	28	28	28

Table 1: Bivariate Correlation: Source, Own Computation

Descriptive

	LOGGDP	LOGTL	LOGFDIM	LOGDIN
Mean	2.858666	2.975033	1.075319	2.565446
Maximum	2.967172	3.181872	1.189855	2.668759
Minimum	2.704594	2.773860	-3.698709	2.400192
Std. Dev.	0.067962	0.097806	1.486762	0.081630

Table 2: Source: Own Computation

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.103	3	.034	36.921	.000 ^b
	Residual	.022	24	.001		
	Total	.125	27			

a. Dependent Variable: LOGGDP

b. Predictors: (Constant), LOGFDIM, LOGDIN, LOGTL

Table 3: ANOVA: Source, Own Computation

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.907 ^a	.826	.804	.03042037	1.589

a. Predictors: (Constant), LOGFDIM, LOGDIN, LOGTL

b. Dependent Variable: LOGGDP

Table 4: Model Summary: Source, Own Computation
 Heteroskedasticity Test: White

F-statistic	2.040244	Prob. F(3,22)	0.1376
Obs*R-squared	5.659135	Prob. Chi-Square(3)	0.1294
Scaled explained SS	3.945046	Prob. Chi-Square(3)	0.2675

Null Hypothesis of Homoscedasticity is not rejected because prob. > .05

Table 5 Heteroscedasticity Test, Source: Own Computation

NOTE:

Research was conducted by the author as part of Masters Dissertation Project at the University of Westminster.