

THE INFLUENCE OF A HIGHLY-VALUED MARKET ON M&A ACTIVITY

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Abstract

Merger and Acquisition decisions are about timing, opportunity, and decision. In the business world, these three words are partially influenced by the strength of the stock market. The timing is when the stock market is highly valued which results in high stock valuation, after that is the opportunity which means to find a target or if an existing target has lower stock valuation and finally comes the decision to make whether to use cash or equity for the transaction. Since companies can use its stock as leverage to acquire companies, a highly valued market gives the companies the resource with which to make purchases. Therefore, the question arises whether the stock market influences the decision for companies to engage in M&A transactions. This question is addressed in this study using a relatively large panel data of M&A activity for the period 2008-2017. The econometric tool used in this study is regression analysis. The measurement that this study used to value the stock market is by measuring the stock market capitalization to GDP ratio of a country. The results displayed that the stock market to GDP ratio is statistically significant at 5% risk on the M&A activity and with a 1% increase in the stock market we expect a 0.1729% increase in the M&A activity. Additionally, the paper suggests the development of a regression model that can measure the FDI inflows in Albania, and this is achieved by adjusting the regression model variables in order to become more suitable for its economy.

Keywords: Mergers & Acquisitions volume, market value, developing markets, emerging markets, Albanian economy.

1. Introduction

It is a mistake to think that finance is only about the time value of money because if it was only about the time value of money that would be so simple and boring at the same time. Finance is more about creativity and complexity, like art itself. People think the concept of finance is like the concept of traditional banking which is selling money that the bank has with interest, while in reality finance is more creative and its creativity lies in creating a market where there is none, by offering something that hasn't existed before. Finance gives the ability to financial institutions to monetize everything possible an example of that is the collateral debt obligation which is a type of derivative, in simple words is just a contract that derived its value from an underlying asset and was first introduced in 1987.

I think is important for finance to be considered as a capability, which by definition means that it has

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the ability to do or create something. When this capability is combined with strategic choices, it results in Merger and Acquisition decisions.

Merger and Acquisition is a corporate capability deployed to support a strategy and as a strategic choice is commonly used for organizational growth in companies that choose to grow by taking an additional market share, reach a new customer base, increase efficiency and decreasing costs through synergies. An M&A is a capability that creates value and provides returns for their stakeholder. The role of finance in M&A is very important because it is in charge of everything and through finance companies are looking at all different functions of the target firm in the due diligence process, whether that is the supply chain, sales, procurement, technologies or everything that has an impact in the financial statements.

When companies do due diligence, they are try-

ing to value a company and to confirm a price to pay and these things are reached through financial metrics. Additionally, finance is also included in the decision of which method of payment to use for the transactions, whether a company should use its company's stock for the transaction because it is more valued in the market than the target's stock or should use a combination of cash and equity for the transaction.

Today the growth of companies in many cases occurs through M&A. According to the Institute of Mergers, Acquisitions, and Alliances (imaa) in 2019, there were 49,386 M&A transactions worldwide, which means approximately 135 transactions a day. In previous years, the global M&A market has increased significantly. In 2017 the M&A market reached a transaction volume of \$3.7 trillion, which turned into the fifth most active year on record (Hernan Cristerna, January 2018). In addition, according to the same report of J.P Morgan, the M&A market in 2006 reached a transaction volume of \$3.9 trillion and in 2016 reached a transaction volume of \$3.8 trillion making them the third and the fourth most active years respectively. In particular, the US M&A market has never stopped growing, as we can see in Figure 1 the transaction volume is increasing over the years. Additionally, the US stock market has experienced a 468% gain for the S&P 500 from March of 2009 to November of 2019 (Li, 2019), as can be seen in Figure 2.



Figure 1: M&A (Number & Value of transactions) in the United States in the period 2009-2019

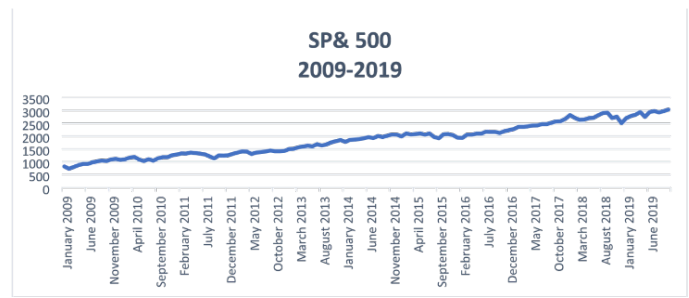


Figure 2: United States stock market measured in the S&P 500 index in the period 2009-2019

Therefore, the question arises whether the M&A activity is driven by the valuation of the stock market. First of all, let's observe some graphs related to M&A activity and the stock market in the United States over the past years. The graph in Figure 3 illustrates the S&P 500 index from 1990 to 2008. If we compare this graph with the graph in Figure 4 which illustrates the M&A activity in the United States in the same period, we can understand that at the same time when there was a bull market the M&A activity increased tremendously. Additionally, the 5th (1993-2000) and the 6th (2003-2008) M&A wave occurred in the period of a higher stock market valuation.

Furthermore, the authors Matthew, David, and Robinson (2004) tested the theory of stock market-driven M&A idea and they found that listed companies are more likely to engage in M&A activities when the stock market is overvalued. (Matthew Rhodes-Kropf D. T., 2004). Moreover, Shleifer and Vishny (2002) analyzed the same theory and concluded that companies make equity-financed acquisitions when their equity is highly valued, more specifically when it is more highly valued than the target's equity. On the other hand, companies with relatively less overvalued equity than others usually become takeover targets. Hence, it's obvious that the stock market is one of the most important factors that influence these increases in M&A. In particular, M&A transactions are often financed fully or partially with stocks, thus a high stock value gives companies the resources with which to make those transactions.

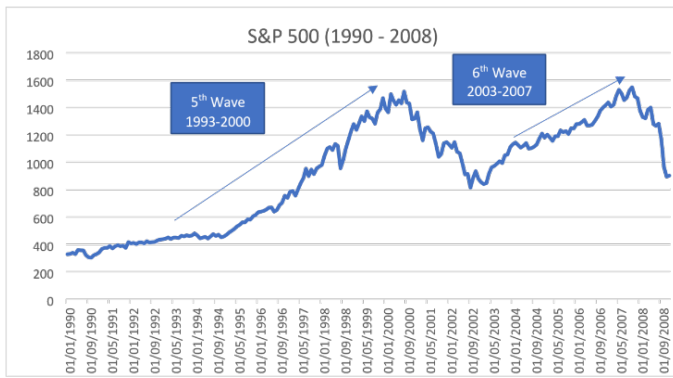


Figure 3: United States stock market measured in the S&P 500 index in the period 1990-2008

Considering all the above information, this article aims to identify if the M&A activity is driven by the high valuation of the stock market not only in the U.S but on other countries, also taking into consideration both developed nations and emerging markets from the period 2008 to 2017.



Figure 4: M&A (Number of transactions) in the United States in the period 1990-2008

2. Literature Review

The relationship between market valuation and the M&A activity, it's quite obvious. Many researchers and executives count on market valuation as a crucial element of a company's decision for growth. According to the study of RhodesKropf and Viswanathan (2004) which suggest that both bidders and targets have exclusive information about the real value of their firms, but the value presented is the valuation of the firm that is affected by the market and firms' specific components. Therefore, the misevaluation occurs when a firm's stock is more highly valued than its actual value, which results the bidders rationally adjust the overvalued-stock offer for potential misevaluation of the target. This

increases the chances that the target will accept the bids and assigns some probability to synergies too. But the more overvalued the market is, the greater is the estimation error of the synergy. Thus, overvaluation at the market level increases the probability that the target overestimates the potential synergies due to the underestimation of the misevaluation (Matthew Rhodes-Kropf D. T., 2004). In accordance with the study of Rhodes-Kropf and Viswanathan (2004) is the study of Shleifer and Vishny who support the idea of the stock-financed acquisitions when firm's equity is more highly valued than the target's stock, therefore, the management of the firm respond accordingly when perceive the company's stock to be misvalued by an inefficient market.

In addition, Rhodes-Kropf and Robinson and (2005) conducted another study and found that companies with a high market-to-book ratio use stock-financed transactions in M&A than companies with a lower market-to-book ratio. (Matthew Rhodes-Kropf D. T., 2005) Furthermore, James and Cheng (2006) who used the same measurement, the market-to-book ratio, reached the same conclusion. The finding of Jovanovich and Rousseau emphasize the correlation between M&A activity and market valuation. They used the Q value to represent the market valuation, in addition, there are empirical studies which found that the higher the Q value, the more likely M&A transactions occur.

Indeed, the study of Chousa, Tamazian, and Vadlamannati (2008) found that the stock market in emerging economies during the period from 1990 to 2000 experienced really fast growth. This level of high growth in capital markets resulted in high volumes of M&A activity throughout the 1990s at a domestic level. Moreover, Giovanni (2005) found that the size of the capital market, measured by the ratio of stock market capitalization to Gross Domestic Product (GDP) has a positive correlation to M&A volume. In particular, his estimation shows that a 1% increase in the stock market capitalization to GDP ratio is associated with a 0.955% increase across the border M&A activity.

3. Methodology

In my thesis, I analyzed three specific

macroeconomic factors, which are: Economic Freedom, Economic Growth and Stock Market Size (market value). The reason behind why I chose to include the Economic Freedom component in my regression equation is because I believe that policies that promote foreign direct investments are very important for a country to have a prosperous and healthy economy in the future. The Economic Freedom from the Heritage Foundation is measured into four broad categories which are: Rule of law, Government Size, Regulatory Efficiency, and Open markets. Each of these categories is measured in terms of trade freedom, government integrity, business freedom, judicial effectiveness, investment freedom and so on. This macroeconomic component is crucial for economically free societies because the government allows labor, capital, and goods to move freely. These important benefits can encourage foreign investors to invest their money more in foreign countries, resulting in a higher volume of cross-border M&A activity. Moreover, most of the CM&A deals have occurred between developed countries that promote such policies. I believe the advantages of financial openness lead primarily to higher economic growth and lower volatility in a country, thus, encouraging foreign investors to invest their capital in these countries. Therefore, it should be the governments' best interest to abandon anti-foreign restrictions and make sure that their policies promote financial openness.

Additionally, the reason why I chose to add Economic Growth as another component in the regression model is that it represents the future prospect of a country. Companies might seek to exploit markets where there are signs of inflation, which primarily comes when the demand for goods and services is higher than the supply and it's often an indicator of a robust economy. In such economy, the interest rates are low which translates to more spending by the costumers and the more customers spend, the more the economy grows, resulting in a surge in demand for products and services which make a country attractive for foreign investments because an increase in demand that can't be met by supply results in inflation. An example of that is that the emerging markets and MNEs want to become part of that accelerating economic system, and in the last years, the traditional pattern of M&A activity which primarily occurred

between developed nations changed, meaning that emerging markets have been attracting FDI in the form of CM&A also. Therefore, I believed that with higher economic growth in a country the more M&A activity will occur because for a company to compete with both domestic and foreign competitors, it should have to look for better opportunities for the continued growth of its business, whether it has the intention of market expansion or diversification of its business. As a result, it would be better for a company to invest in fast-growing economies rather than in slow-growing economies, because fast-growing economies would better accommodate the investment and yields better returns than slow-growing economies where consumer spending is not yet a strong indicator of the economy.

However, both of these macroeconomic factors didn't have any impact in the regression model and I was rebuilding the model over and over for one month to confirm if I did any mistake in the data set. I also changed the application where I analyzed the data but were the same results again. After all these attempts, I concluded that there are many explanations for that contradictory results, but the main underlying reason I believed was due to the relatively small sample size compared to the previous studies. (Visic & Skrabic (2010) and Dabla-Norris, Honda, Lahreche & Verdier (2010), Garita & Marrewijk (2007))

Another reason might be also that the focus of that study was different from the previous researches, meaning that I investigated countries from different regions around the world, such as North American, Latin America, Africa, Asia and Europe and in a different period from 2008 to 2017. Therefore, since in my thesis, I found only the stock market to GDP ratio to be statistically significant in the first regression model, I chose to include only this finding in this article.

3.1. Research Approach

The methodology in which this study was conducted was built around a comprehensive review of M&A literature about the impact of stock market valuation in the M&A activity. Furthermore, I used a deductive research approach, meaning that the hypothesis was formulated based on existing theories. One theory that triggered my

attention stated by Giovanni (2007) in his research study that the size of the capital market measured by the ratio of stock market capitalization to GDP has a positive impact on M&A volume and he found a 1% increase of the stock market resulted in a 0.955% increase in CBM&A volume.

After that, I designed a research strategy to test the hypothesis. In order to test the hypothesis, I applied a quantitative method through the use of a regression analysis. The quantitative approach was the most appropriate since the main purpose of this study was to draw a general and statistical conclusion about the M&A transaction in international markets. This is the reason why I chose to analyze a relatively larger sample rather than focusing on a single unit (country) because the focus of this study was to analyze the impact of the stock market size on the M&A volume and not how it does a country affect the M&A volume. Additionally, the quantitative nature of the approach ensures that the analysis is objective. The objectivity of this research is reached by using reliable data from trustworthy institutions. Finally, the conclusion is reached through the analysis of 5 developed and 5 emerging markets and the results were statistically tested in order to determine whether or not to reject the hypotheses using the mentioned quantitative strategy, the regression analysis.

3.2. Data and Sample

This research study focuses on 10 different countries around the world in the period from 2008 to 2017. The reason why I chose this period is that the years in which the deals took place are important, as it allows it to be linked to the macroeconomic data. 2008 was chosen as the starting year due to the limited access I had in databases for the financial data, thus more complete information regarding the variables was easier to gather from 2008 onwards. The sample consists of 10 countries from which 5 are developed and 5 are emerging markets. The idea behind why I chose 5 developed markets and 5 emerging markets is because M&A transactions used to occur primarily in developed markets due to political and economic stability. However, the emerging markets have been growing rapidly over the past years, therefore, have become one of the main engines for growth of multinationals firms,

as a result, M&A transaction in emerging market are significantly important and should be taken into consideration.

The requirement for the countries selected for this research study was for them to have a stock market because the value of the stock market relative to the GDP of the country is used in the regression analysis. Additionally, the requirements for the deal volume of a country were that the type of transaction should have been as Merger & Acquisition, the M&A transaction was announced between the period 2008 to 2017, and all the M&A transactions had a known value. The financial data (Observation) of a total of 100 for those 10 countries were collected with the intention to achieve enough statistical power for the regression analysis in order for this study to provide reliable results. The country's variables are observed in a panel format from 2008 to 2017. The set of data includes the dependent variable Deal volume, which I used to represent the volume of M&A activity as a whole in these countries. Moreover, it is measured in billions of dollars that occurred in a given country in a given period from M&A transactions.

Table 1: Transactions volume (bn \$) of M&A activity (2008-2017)

DE	SG	FR	JP	U.S	ZA	CN	IN	MX	BR	Cou ntry
146.9	61.47	186.99	130.49	1,215.09	26.10	215.68	48.44	11.2	105.1	2008
118.4	21.6	81.99	109.37	877.61	32.56	191.55	41.08	10.2	70.4	2009
55.9	40.74	107.05	111.56	981.80	27.46	309.78	59.20	54.2	160.2	2010
75.7	37.75	104.27	131.01	1,247.04	20.64	229.67	34.88	26.8	92.5	2011
94.4	65.35	51.40	162.27	995.65	15.65	231.34	36.53	34.0	69.4	2012
101.1	36.29	96.57	114.17	1,214.79	11.43	325.23	31.61	32.2	69.13	2013
182.1	73.9	250.72	112.69	2,153.80	20.07	519.37	31.44	23.1	56.74	2014
115.9	65.48	157.64	162.32	2,417.39	44.89	1,038.12	52.77	19.2	50.12	2015
222.8	62.55	151.41	150.98	1,784.77	22.32	757.06	51.77	13.7	47.34	2016
141.2	79.54	201.42	127.08	1,761.54	16.69	739.72	68.35	16.6	65.63	2017

Table 2: Stock market value as a percentage of GDP to its corresponding country (2008-2017)

DE	SG	FR	JP	U.S	ZA	CN	IN	MX	BR	Cou ntry
29.60	137.85	50.45	61.85	78.75	168.32	38.68	54.53	21.09	34.91	2008
37.81	250.12	72.34	63.20	104.57	270.00	69.93	98.68	39.11	80.22	2009
41.84	273.76	72.33	67.15	115.50	246.44	66.02	98.50	42.95	69.97	2010
31.52	216.79	54.31	54.01	100.79	189.48	45.06	55.25	34.62	46.97	2011
41.94	263.21	67.37	56.08	115.56	229.03	43.19	69.12	43.72	49.79	2012
51.59	244.51	81.86	88.12	143.99	257.15	41.11	61.34	41.27	41.27	2013
44.69	241.65	73.13	90.26	151.09	266.35	57.29	76.42	36.53	34.36	2014
50.83	210.44	85.65	111.38	138.34	231.77	74.00	72.12	34.36	27.22	2015
49.34	206.75	87.65	100.12	146.86	321.67	65.42	68.89	32.66	42.28	2016
61.52	243.05	106.46	127.72	165.65	352.85	71.18	89.65	36.23	46.45	2017

The Deal volume in the regression model was calculated by logging the deal volume values of every year (2008- 2017) for each country because it results in a better normal distribution of the variable's observation, which is necessary for the panel data regression. This measurement is scaled on the model with respect to its corresponding country during the period from 2008 to 2017.

The independent variable, the macroeconomic factors, in this case, which is the Stock Market Capitalization to GDP ratio measures the overall market value relative to GDP. Following Giovanni (2005) found a positive correlation relating to M&A flows. However, many investors use this financial measurement to determine if the market of a country is overvalued or undervalued compared to a historical average.

Furthermore, this variable in the regression model is transformed into its logarithm for the same reason as for the dependent variable. Finally, the years of the macroeconomic data observation of a country has been included to be able to match the year of each deal volume data of that country.

3.3. Regression Model

In order to make an analysis to find if there is any correlation between deal volume and the stock market to GDP ratio a regression with panel data set is run using the OLS method and was developed in Stata software. A regression analysis was built to identify the impact of the stock market value relative to GDP on the deal volume for the period 2008 to 2017. The equation of the model that is going to estimate the relationship will be:

Equation 1: Ordinary Least Square Regression:

$$Y = \beta_0 + \beta_1 \times x_1 \quad (1)$$

Where,

Y: The deal volume of the countries (2008 - 2017)

β_0 : The regression constant

β_1 : The coefficient of the factor (x_1)

x_1 : The stock market to GDP ratio of the countries (2008 - 2017)

To determine whether there is any correlation between the stock market and deal volume, I have come up with a hypothesis:

- **Null hypothesis H_0** : The Stock market to GDP ratio does not affect the M&A activity of a country.
- **Alternate hypothesis H_1** : The stock market has an impact on the M&A activity of a country.

The interpretation of the regression analysis is carried out by examining the determination coefficient (R^2), which explains to what percentage the dependent variable is explained by the independent variables. This study uses as a measurement of the significance level for the independent variable the p-value approach. The p-value for the independent variable tests the null hypothesis that the coefficient is equal to zero, meaning that it does not affect the model because it suggests that changes in the independent variable value are not associated with the changes in the response variable Y.

This occurs when the p-value is higher than the significance level α . Contrary to a low p-value indicates that you can reject the null hypothesis, meaning that the independent variable is meaningful to our model because a change in the independent variable value is related to changes in the dependent variable value. Additionally, the significance level α chosen for this study is equal to 5% ($\alpha=0.05$), meaning that for each explanatory variable (x_n) with a p-value higher than 5% the conclusion is that this variable has no effect or is not significant at all on the response variable Y.

4. Data Analysis

In the following table, the results after performing the econometric analysis using the STATA software are presented.

Table 3 Regression Model output (2008-2017)

Variables	Coefficient (x_1)	Std. Error	P-Value
Stock Market to GDP ration	0.1729	0.069	0.015
Observations	100		
No. Of Groups	10		
R-square	0.9819		
Adj. R-square	0.9799		
Prop > F	0.0152		

The regression model for the stock market to GDP ratio as an independent variable and deal volume as a dependent variable for the entire data sample displayed an adjusted determination coefficient (Adj R-squared) of 0.9799. This means that the variation in the deal volume is 97.99% explained by the included independent variable the stock market to GDP ratio according to our investigation period (2008-2017).

Moreover, the model yielded a p-value of 0.015, which means that the stock market to GDP ratio has achieved significance in the regression at the 5% significance level. In other words, the M&A deal volume in a country is significantly influenced (with a 95% confidence level) by the stock market to GDP ratio. The p-value means that there is a 1.5% risk that the assumption of the included variable does not hold. Additionally, the sign of the coefficient of the independent variable was expected to be positive. Therefore, it was also expected that the higher the stock market value relative to the GDP of a country the bigger the chances that the M&A activity will increase. I support this argument with the results above when I found that the stock market to GDP ratio was significant in the model at a 5% risk. Therefore, the results from the coefficient show us that a 1% increase in the stock market to GDP ratio we expect the Deal Volume (Y) to increase by 0.17%. Thus, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted.

- The null hypothesis can, therefore, be rejected, meaning that there is a statistically significant effect between the Stock market to GDP ratio in the Deal volume according to our sample.

Finally, the result of this analysis is in line with the result that Giovanni (2005) found in his study that the stock market relative to GDP has a positive impact on M&A volume.

5. Conclusion

The purpose of this paper has been to investigate whether the M&A activity can be explained by the stock market to GDP ratio using a combined sample of developed and emerging markets for the period 2008 to 2017. This research aimed to provide a better understanding of whether the stock market value has an impact on M&A activity. The hypothesis was formulated based on previous literature and a regression analysis was performed using the macroeconomic factor to determine whether it has an impact on the M&A activity. Based on the results of the regression analysis, it can be concluded for the entire sample that the stock market to GDP ratio has a statistically significant effect on the M&A activity. In particular, the coefficient for this indicator implies that a 1% increase in the stock market to GDP ratio is associated with a 0.1729% increase in M&A activity. This number is both economically and statistically significant. In accordance with previous studies mentioned in the literature, the impact of the stock market to GDP ratio on M&A activity is similar to the results that Giovanni (2005) found in his analysis.

The bottom line of this study tells us that an increase in the stock market results in an increase in M&A activity in a country. This finding is reliable and should be taken into consideration because an important factor in encouraging companies to engage in M&A transactions is the strength of the stock market. Merges and Acquisitions are often financed with stocks and high stock values give companies the resources with which to make purchases. The company's shares can be used as a currency because a company can use its stock as leverage to buy companies or acquire competitors. For instance, consider a company in growth mode with a highly valued stock the company can use

the portion of the agreed upon purchasing price of an acquisition to be done by giving stocks instead of cash and the target company will consider it as a good deal due to the strong outlook of the acquiring firm because its stock has a high value, therefore, it represents the investor's confidence and the prosperity of the company. A highly valued stock of an acquiring company allows them the financing process to be more favorable for them than paying the entire transaction with cash.

5.1. Adapting the regression model in the Albania market

The conclusion that is drawn from the results of this study and the regression model that I applied in my thesis leads us to new potential questions and different approaches that can be carried out. Albania is a country that hasn't a sophisticated and suitable market for M&A transactions because such corporate transactions occur primarily in developed nations and fast-growing economies and Albania is not one of them. Therefore, in order to apply the regression model in the Albanian market, we should adapt it and change it according to the circumstances.

The regression model that I built in my thesis is as follows:

Equation 2: Multiple Regression Analysis

$$Y = \beta_0 + \beta_1 \times x_1 + \beta_2 \times x_2 + \beta_3 \times x_3 \quad (2)$$

Y : The deal volume of the countries (2008-2017)

β_0 : The regression constant

β_n : The coefficients of factors (x_1, x_2, x_3)

x_1 : The stock market to GDP ratio of the countries (2008-2017)

x_2 : The GDP growth of the countries (2008-2017)

x_3 : The Economic Freedom of the countries (2008-2017)

This particular model is not possible to be applied in the Albanian market because in the first place this equation measures the macroeconomic factors that make a country attractive to M&A transactions. The Albania market from an

economic point of view isn't an advanced market that supports M&A activity, meaning that it is not attractive to both domestic and foreign companies to engage in such transactions. However, since M&A is a component of Foreign Direct Investments, we can build a regression model specifically for Albania that measures the impact of some elements on FDI inflows.

Before I suggest the regression model, I'll explain my reasoning behind each component of the equation. The Albania legal system has a civil law system that consists of the Constitutional Court, the Supreme Court, First Instance Courts and Courts of Appeal (Gentry, 2005). All legal acts must be in compliance with the Albanian Constitution, which is the highest law. "The Constitutional Court has jurisdiction over the review of constitutionality of law and guarantees and maintain compliance with the Constitution and reviews the compatibility of laws and normative acts of central and local bodies with the Constitution or international agreements and has the right to interpret its content" (Gentry, 2005). Additionally, individuals or legal entities that also include foreign companies that are regulated under Albanian laws can address the Constitutional Court if they claim that the right for a fair legal process has been violated.

In August 2016, the law on Reassessment of Judges and Prosecutors was first introduced in Albania known as "vetting". It is part of a wider judicial reform demanded by the EU and its purpose is to cleanse the justice system of corruption and political influence and increase the system's effectiveness and the public trust in the justice system, therefore, to acquire the foreigner's trust also. In 2018 the vetting process started in the Constitutional Court and after 10 months there was only one judge remained in the court because the other judges were dismissed for the unjustified assets they held or resigned in order to not be evaluated in the vetting process (Hoxha, 2019).

This is leaving the country in a political crisis because it is lacking a key pillar of democracy the Constitutional Court since the court is not able to make any decision by one member. Its absence has given the government the opportunity to pass a number of laws through the Parliament, in spite of their unconstitutionality that could not be canceled in the absence of the highest court of the country.

Therefore, political uncertainty and corruption negatively affect the decision to make investments in a country, leading to a negative impact on FDI inflows. Considering the above information my suggestion is to include an independent variable in the development of the regression in Albania and that variable should be corruption or political stability. The reason why someone should choose between those variables is that most metrics that measure the political stability in a country include the corruption in that measurement, therefore, taking into consideration in the model both variables will result in multicollinearity, meaning that both variables are affecting each other which is forbidden in statistical analysis. However, I may suggest another way to measure corruption and political stability in a country since an important part of that stability comes from the legal system. Since the Index of Economic Freedom is measured by 10 components, we can use some of the components in our analysis according to our needs.

My suggestion, therefore, will be the variable that will include corruption might be gathered from the Transparency International's Corruption Index (CPI) or The Economic Freedom Index since both are the same. The component Government Integrity from the Economic Freedom index measures corruption and is derived primarily from the CPI, but I suggest to use the Government Integrity rather than the CPI because CPI is based on a 10-point scale in which higher score indicates lower corruption and a lower score indicates very corrupt government. On the other hand, Government Integrity is based on a 100-point scale which is helpful to the researcher since the variables will be better normally distributed with the other independent variables when they are transformed in logarithmic variables to provide a better statistical analysis. The other explanatory variable that measures the stability of a country should be the Judicial Effectiveness which is also a component in the Economic Freedom Index.

An effective and well-functioning legal system is important for protecting the rights of the citizens and of the companies against unlawful acts by others, including also governments and powerful private parties. Judicial effectiveness requires an efficient and a fair judicial system to ensure that laws are respected and legal actions are taken against violators and this is measured

by the Judicial Effectiveness component of the Economic Freedom Index since its score is derived by measuring and averaging the factors of judicial independence, quality of the judicial process and favoritism in the decision of the government which all are weighted equally to provide the score. I strongly suggest for these variables to be taken into consideration since they are reliable and objective because according to the Heritage Foundation their sources of the index rely on trustworthy institutions, some of them are the World Bank, The World Economic Forum, World Competitiveness Report, and Transparency International.

Financial sector development goes beyond just having financial intermediaries that provide financial access to enterprises, it entails having strong policies for regulation and supervision of all the important entities. The characteristics of a developed financial sector are access, efficiency, and stability, which facilitates the transactions between entities and the access of companies to information. It is very important for a country to have a developed financial sector since plays an important role in economic development because it promotes economic growth through capital accumulation, producing information about investment, facilitating and encouraging the inflows of foreign capital and optimizing the allocation of capital thus increasing investment and productivity that result in higher economic growth. (Global Financial Development Report, 2019).

Albania doesn't have some of the mentioned elements that create a developed financial sector because the development occurs when financial intermediaries and policies ease the exchange of goods and services, the accessibility to credit and the access of information about possible investments and allocation of capital. Therefore, Albania lacks the ability to provide the key functions of the financial sector in the economy that companies are looking for when considering to invest in a country. For these reasons, I believe that financial development should be included in the regression model as an explanatory variable. Another, good measurement of financial development is the ratio of private credit to GDP that captures the size of banks loan relative to the economic output and many studies have used that measurement in order to determine the financial development of a country, however, the World

bank provides the Global Financial Development Database that besides the accessibility to credit, it indicates also the quality, efficiency and the stability of the financial sector which is a more complete measurement about the development of the financial sector.

Considering all the above information, the development of the regression model would look like this:

$$FDI (inflows) = \beta_0 + \beta_1 * FnclD + \beta_2 * Cr + \beta_3 * JdclEf \quad (3)$$

Where

FDI: Total of FDI inflows in Albania

β_0 : The regression constant

β_n : The coefficients of factors

FnclD: Financial Development score

Cr: Corruption score

JdclEf: Judicial Effectiveness score

We expect all the independent variables to positively affect the dependent variable, meaning that the higher the score of Albania in the independent variables, the more FDI inflows will attract. Finally, this equation is my suggestion, however, future studies might change and adapt the variables according to the judgment of the researcher.

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