The Effect of Gross Domestic Product and Money Supply on Inflation, Albanian Case

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Abstract

One of the biggest macroeconomic issues is the correlation between economic growth, inflation and the total amount of money in circulation or in existence in a country. Case of Albania is quite sensitive since it has been under the communism for a long time. Only after the fall of communism which started deteriorating in 1990, Albanian economy started having a good performance on fighting the post-communism. Economic growth is the best indicator to measure the performance of a country in a year. Thus, it has to do directly, positively or negatively to other indicators. The methodology used to understand the relationship (effect) of GDP and money supply on inflation, is multiple regression analysis. In this case we examine a sample made of 14 years from 1994 up to 2008. The independent variables are GDP and money supply since both have a crucial effect on the increase in prices and fall in the purchasing value of money.

Keywords: Communism, Inflation, GDP, Money supply, Indicators, Regression, Sample.

Methodology

The research for this study will consist of a literature analysis and comparison of the claims made by different authors around the world and international researchers concerning the nature of economic growth on behalf of money supply and inflation since they are two of the biggest macroeconomic factors in an economy. The study does not include an experiment, but it includes an analysis supported by Microsoft Office Excel. This analysis is broadly known in the field of quantitative subjects. We provide the data from 1994 up to 2008 and look at the behavior of the macroeconomic factors between each other to determine the leak between them.

Introduction

Republic of Albania is one of poorest countries in the Southeastern Europe. The difficult decades that are known widely by the history of Albania, were passed in a successful way regarding economics. Among other countries which were in the same political conditions, Albania seemed to be facing the changes in economy and politics quite well after 90's. This is shown by the values of macroeconomic indicators for the time. Enver Hoxha, was the leader of Labour Party in Albania. He made a huge change in the social and political areas leading to isolation from the other countries of the world. People were not allowed to e/immigrate nor to accomplish personal duties that were not ruled by the Labor Party. This led the country into a difficult era. The death of Enver Hoxha was soon followed by the fall of communism period in Albania. People started to raise their voices for democracy. These movements started in the north of Albania, Shkoder. Soon the Socialist Republic was demolished; instead Republic of Albania took place in 1991. The country started to face every single change regarding the economic transformation. Isolation to free market economy was largely successful even though it was followed by the pyramid schemes in 1997[1]. There have been ups and downs for Albania until today. The paper aims to discover the importance of the period 1994-2008 for Albania since it covers the post-communism period and the global economic crisis. Specifically, we will be covering the relationship between three very important macroeconomic indicators such are: GDP, Inflation and Money Supply. Although GDP is the best indicator to show us the economic growth, seems that still there are debates occurring between authors on deciding the correlation of economic growth negatively on other indicators. GDP is the value of all final goods and services, the amount of total expenditures in a country in a period of time. Money Supply is the total amount of money circulating in a country while inflation is the rise in prices from different factors affecting a country, both for a specific period of time. The government changes the rule for the banking system if the country is in debts or any other financial problem. It takes the central bank (Bank of Albania) rise the money supply by printing more and more money. Thus, the velocity of money decreases. From macroeconomics we know that when money supply increases in a certain percentage, in the same amount will increase the Aggregate Demand (AG). In this case inflation would occur. The only case when inflation is not involved is when Aggregate Demand and Aggregate Supply are held constant for the same amount of money supply. For the period 1994-2008, in Albania there have been a lot of researches about the topic since it was the most delicate period of our country. Soon after there have been some sub periods such as 1997 and 2002 where the banking systems and pyramid schemes made the economic indicators vary in big amounts[2]. The factors of economic growth are the main reason why different authors get different correlation between these specific indicators in different period of times.

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[1] See Section III

[2] The informal credit market during Pyramid Schemes Period was registered half of countries GDP

Recently, intensive research has focused on the nonlinear relationship between inflation and economic growth. That is, at lower rates of inflation, the relationship is positive or not significant, but at higher rates, inflation has a significantly negative effect on growth. Also the money supply affecting both has the same impact. A high amount of money supply leads to a higher inflation rate, thus a negative correlation between economic growth and inflation. However, there is much less agreement about the precise relationship between inflation and economic performance, and the mechanism by which inflation affects economic activity. Still, as some other authors mention during their research papers, there is still much discussion about the three chosen variables

Literature review

The concept of the quantity theory of money (QTM) began in the 16th century. As gold and silver inflows from the Americas into Europe were being minted into coins, there was a resulting rise in inflation. This led economist Henry Thornton in 1802 to assume that more money equals more inflation and that an increase in money supply does not necessarily mean an increase in economic output. Here we look at the assumptions and calculations underlying the QTM, as well as its relationship to monetarism and ways the theory has been challenged.

Fisher Model (1993) was another author who has studied about the relationship between inflation and economic growth entitled “role of macroeconomic factor in growth”.

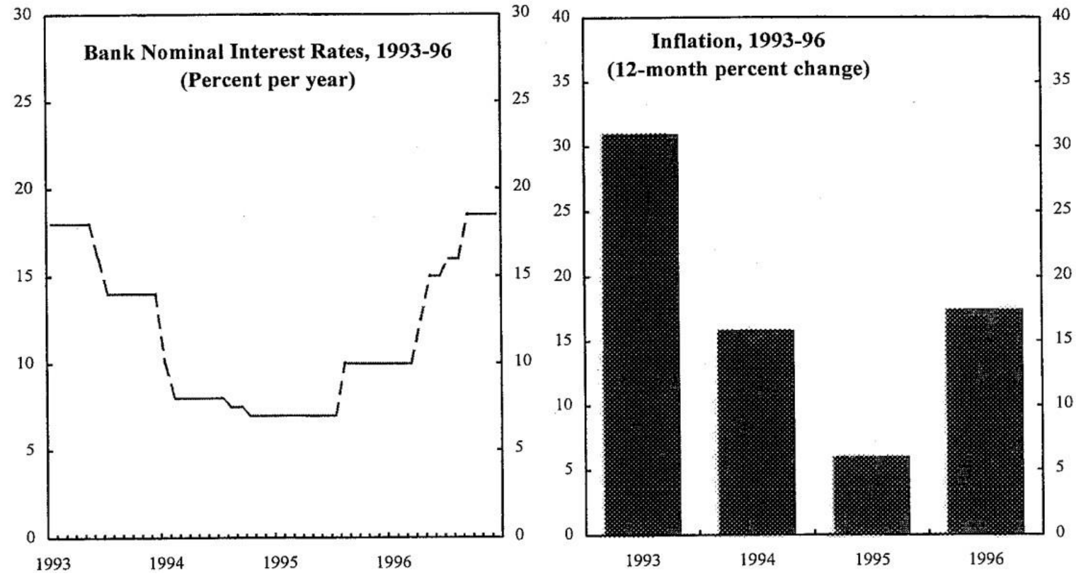
First, as Friedman (1977) argues, higher inflation rates may cause the reallocation of sacre resources to unproductive activities and thus reduce output growth. Furthermore, according to Friedman (1977) and Ball (1992), inflation rate increases inflation uncertainty and distorts economic efficiency, and thus increases unemployment. Second, inflation may increase interest rates and thus reduce investment (Chun, 1994). Third, if cash is required to purchase capital goods, inflation may reduce steady-state capital stock (Stockman, 1981). Fourth, inflation may adversely affect bank lending and financial activity, as Huybens and Smmith (1999) argue, which, in turn, is positively correlated with real economic activity. Fifth, inflation may increase user cost of capital and reduce investment (Feldstein, 1983).

Robert J. Barro (1997) also studied the relationship between inflation and economic growth. He used 30 years data from 1960 to 1990 of 100 countries. He included other determinants of economic growth additional to inflation. To analyze the data, systems of regression equation were used. The regression results indicated that an increase in average inflation by 10% per year leads to a reduction of the growth rate of real per capita GDP by 0.2% -0.3% per year and a decrease in the ratio of investment to GDP by 0.4%-0.6%. But the result is becoming statistically significant only when high inflation experiences are included in the sample. Moltey (1994) includes inflation in his model to examine the effect of inflation on the growth rate of real GDP.

He extend the model of Mankiw, Romer and Weil (1992) which was based on Solow growth model by allowing for the possibility that inflation tends to reduce the rate of technical change. The result indicates a negative relationship between inflation and the growth rate of real GDP. There are empirical evidences that support the findings of Mundell (1963) and Tobin (1965) of a positive relationship between economic growth and inflation. Mallik and Chowdhury (2001) are among the supporters of positive relationships between the two variables. To reach this conclusion they used co-integration and error correction model to analyze data collected from four south Asian countries (Bangladesh, India, Pakistan and Sirlank) and found a long run positive relationship between inflation and economic growth. They concluded that moderate inflation is helpful to faster the economic growth.

1996-97 and 2002

After the fall of communism, Albania had to handle a lot of democratic and economic changes. The country became a democratic one and the economy an open one. Soon enough there started to appear some problems related to the economic situation as a whole. Up the point of communism fall, the output had fallen into half and inflation rates were in triple digits. The country became the poorest country in Europe, also the least known country. Even though Albania was isolated from 1945-1985[3], GDP growth after communism fall, was positive in some kind of way. Also, inflation rates went to single digits. Country seemed to be facing the situation quite well but the financial system was extremely inadequate[4]. This was the main reason why pyramid schemes appeared in Albania in late 1996 and 1997. They didn’t offer a safe medium where people could invest their money on. Also the interest rates were low. This kind of problems led to informal credit market. The vast majority of those operating were not licensed. They offered a high rate per month, starting by 10% to 4-6%. People would rather invest their money on pyramid schemes (which were unrecognizable from informal credit market) than in the three state banks, the situation of which was deteriorating day by day. Most companies and family savings went into pyramid schemes with the hope to get “more” from “few”. At their most successful time, the nominal value of the liabilities owned by pyramid schemes was almost half of GDP of the Albanian country. After the collapse, which took approximately four months, the country was in serious problems because most of the companies had no money to liquid the payments. Government tried to act against the companies even through violence. Some of the companies got closed but leading the country into a pure chaos, especially in the south of it where the investments had been highest. The collapse of pyramid schemes led to an anarchy where 2’000 people got killed.



Nominal Interest rates and Inflation rate 1993-96

The new elected Socialist Party, with prime-Minister Fatos Nano, made a Recovery Program in order to stabilize the situation. In this recovery some proceedings were mandatory such as:

1. Every credit market should have an administrator whose profession is of the field.
2. Every administrator should report regularly to the government about the credit market.
3. The administrator would have a lot of duties; most of them would require its wide powers to carry on the company’s business.

This Recovery Program was operating on its best from 1998 up to 2002. The period recorded a high economic growth and price stability. Even though many developments took place, some reasonable causes established by Bank of Albania stated that economic growth was being slowed down such are: low foreign investment rates[5], inadequate structural reforms, soothing of economic activity.

[3] The period when Enver Hoxha isolated the country from any economic export and import.
[4] Chris Jarvis, The Rise and the Fall of Pyramid Schemes in Albania 1999

In 2002, there was a shrink on the public sector and the economy was based mostly on private sectors such as transport and constructions. In order to stabilize the economy, in 2002 the imports did exceed exports, leading to a trade deficit as 24, 6% of countries GDP. The trade deficit escalation[6], in year-beginning 2002 made Albanian currency depreciate, which is considered as an important factor also in the price destabilization in year-end 2002 and inflation growth. Some other factors influencing the demand and offer directions are:

- Money supply growth over forecasts
- Currency depreciation
- Increase of prices in the countries where Albania used to export
- Energy crisis
- Agriculture sector was left behind since the privet sector started developing

Inflation mostly is influenced by the growth of money supply, especially M1 which is the most liquid asset, cash. It is considered also as a permanent factor of inflation. The highest money supply growth in Albania in 2002 was in February-April reaching almost 29% by the end of April. The situation got stabilized in May because of the problematic situations of the banks. That would reduce also the impact on the current inflation.

In this case, 1997 and 2002 are clear evidences of the relationship that exists between economic growth, inflation and money supply growth out of forecasts. It is completely wrong to conclude that a factor is determined by another factor only on behalf of digits. We must examine every situation, up and downs of a country in order to clearly visualize which of the factors is partially involved. The two periods are sufficient to prove (without doing the multiple regression analysis at all) that there exists a logical relationship between the chosen variables.

The comparison between post-communist economy in Albania and Poland

Communism is widely known as a terroristic way of leading a country. This comes because of many famous events that have influenced mostly peoples' lives. It has various effects on different sectors of administration since only a hand controls them and that is the person who leads the country who usually is transformed into an icon for the country. In the case of Albania, Enver Hoxha was the leading role of everything that would happen. Communism gets away with a high price in the most delicate sector of a country and that is economy and countries administration. The isolation of the country for 50 years, the disability to recover from the wars damages as all the other countries of the world, the prohibition of foreign investments, the prohibition of people not to leave the country were official evidences of a country that would suffer a lot from economic development. The same would happen in some other countries of Europe and beyond such are: Germany, Poland, China, Russia etc. The reform movement that ended communism in east central Europe began in Poland. Poland was the first country to embrace the democratic governance followed shortly by Germany. The fall of Berlin wall in 1989 was the event that openly declared the fall of communist regime in Europe. In this section we will make a comparison between Poland, the first country to end communist legacy, and Albania, the last one.

During communism these two countries didn’t have much differences. In this period, the same cycle of errors occurred in Poland and Albania as in the other state-planned economies. The political and economic system banned planners from selecting any rate of accumulation and investment. Since there were no direct warning signals from the system, accumulation often exceeded the optimum rate. Investment often covered an excessively broad front and had an over-extended gestation period; disappointingly low growth rates resulted from diminishing capital returns and from the lowering of worker incentives by excessive regulation of wages and constriction of consumption. Planners reacted to these conditions by further increasing the rate of accumulation and the volume of investment. The institutional framework of the centrally planned economy was able to insulate it to some extent from the impact of world economic trends. As a result, domestic industry was not exposed to foreign competition that would force improvements in efficiency or to foreign innovations that would make such improvements possible. Above all, the isolation of the system kept domestic prices totally unrelated to world prices. On January 1, 1990, the Polish post communist government introduced one of the most radical reforms programs ever undertaken in any country during this century. Their aim was to transform the communist economy based on state planning and ownership into an open economy with market allocation of resources and private ownership. The Finance Minister at that time, Leszek Balcerowicz reduced the level of inflation (which peaked at 50% per month), ceased the subsidization of state enterprises, made the currency exchangeable and removed almost all restrictions on foreign trade.

[5] Speech by Mr. Shkelqim Cani, Governor at the Bank of Albania
[6] Escalation according to the Bank of Albania in 2002

The government's actions were intended to stabilize the macroeconomy and to create the conditions necessary for privatization, enterprise restructuring, and the development of an institutional system compatible with a market economy. Because of the speed and scope of the reforms, the impact on Polish markets and enterprises was immediate and profound. Remarkably, the main goals of the program, widely known as "shock therapy," were achieved within a few months. Some critics say that this plan was too aggressive. They believe that the best option would be to gradually bring down inflation and force microeconomic changes. However, this method turned out to be the appropriate economic policy because its stabilization and liberalization measures created conditions that proved extremely favorable to private business development throughout the Polish economy.

Meanwhile the communist regime had a much worse and powerful impact in Albania. We are still in transitioning economy and still haven't recovered fully. One of the main reasons is that Albania chose the extreme position of self-isolation. After the collapse of communism in the other Eastern European countries events pushed very quickly for Albania leading to a difficult path of transition. The difficulties were firstly in the economic, political and social area just like other Eastern European countries, and secondly Albania suffered from diverse internal and external shock. The new democratic government tried to undertake some macroeconomic interventions but the figured showed that the situation was just getting worse. Albania tried to exchange the currency but there was an immediate devaluation, vis-à-vis USD, firstly by 250% and later by another 100%. Unlike Poland, Albania encouraged the privatization of small retail shops and other commercial services but the process was disorganized and some cases of haste and dishonesty occurred. The most important achievement of that time was land privatization by breaking up the cooperatives, a process that had started since late 1990. By 1992 almost 75% of land was distributed to private owners. There was a constant confusion about property rights, so the land remained non-sewn. This led to an extreme food shortage. The liberalization of the decisions, under the conditions of price restrictions and losses, still covered by the state budget subsidies, influenced negatively the financial flows from state enterprises to the budget. Under these circumstances the financial situation deteriorated sharply and the attempts to prevent this remained uncoordinated half measures. As a result the macroeconomic situation of the country was worsened.

By this comparison we can see that the process of "de-communism" went completely in different directions. This came because of the lack of integrity and honesty by Albanian leaders, lack of experts and because Albania chose the most extreme way of communism regime.

Correlation between variables

In this paper of study we are considering the GDP and Money Supply independent while Inflation as a dependent variable. Since the aim of our paper is to show the crucial relationship between these macroeconomic factors, we must state clearly for everybody who reads it the meanings of the terms used. First of all, what is the meaning of dependent and independent variables? Dependent variables are related in some kind of way with other factors, for example in our case Inflation gets higher with higher amount of GDP and money circulation. Independent variables such as GDP are untouched from the amount of inflation, in our case. In other cases, when studying the GDP influenced by inflation, we have GDP as dependent and the other one dependent.

In Albania, since the fall of communism, GDP has had a slight increase over years. This might be explained by the influence of many other factors such are remittances, income, and reduction of poverty, import and export. As GDP increases, it will bring an economic up-turn, greater consumption and a greater velocity of money. Thus, getting banks print more and more money. The greater amount of money the greater the inflation will be. This is the case we are studying, how everything is string-related into a daily basis life.

Money Supply is made of the most liquid components of the money supply (M1 - cash); it includes assets that are highly liquid but not cash (M2) and long-term deposits (M3). The period chosen for the multiple regression analysis is 1994 – 2008 (sample made of 15 years). The main reason why we chose this period is that it has been more like the most difficult political and economical period of Albania to handle. The following will show the results of the analysis in Excel.

First, there is a significant or moderate negative linear relationship between GDP and Inflation (- 0.6489693). As mentioned in the introduction section, we are proving once more that high rates of inflation have a negative effect on economic growth. Also as stated in the literature review section, other authors have concluded that in some cases inflation in high rates alone can affect the down-turning of the economy. Also, this is the case of Albania after the communist regime. Secondly, there is a significant negative linear relationship between Money Supply and Inflation. (-0.5579637), meaning that as much as the amount of money is increasing the inflation will rise. But in economical context, this affect is quite sensitive for the country growth.

Thirdly, there is a strong positive linear relationship between Money Supply and GDP (0.983683). This result comes from the direct usage of money on expenditure and as we know GDP is known also as the total amount of expenditures in a country. As Money Supply increases, every other macroeconomic and microeconomic factor will be influenced. Thus, leading to a change in GDP, the most important factor on deciding if an economy is in positive growth rate or not.

Summary Output

The summary output is taken in three cases with different values of confidence level in order to test the hypotheses for the correlation coefficient whether is significant or not ($\alpha = 0.05$, $\alpha = 0.1$, $\alpha = 0.01$)

- Regression Statistics for

  In the regression statistics we have Multiple R, R Square, Adjusted R Square, Standard Error and number of observations.

Multiple R shows us how strong the relationship between the variables is. The value is 0.788009 wich means that there is a strong linear positive relationship between them.

R squared shows how much variation of the dependent variable is explained by the regression line and independent variables. In this case we have a R Square of 0.62, meaning 62% of inflation is explained by GDP and money supply. The most accurate value is adjusted R Square, which eliminates the spurious fitting problem. It has been adjusted for the number of predictors in the model. In this case adjusted R Square shows that actually 56% of depended variable is explained by independent ones.

Standard error is the same as standard deviation of theoretical distribution of a large population of such estimates. It measures the accuracy with which a sample represents the population. In this study we have a 6.5 standard error.

- ANOVA (analysis of variance)

In the table of ANOVA we have the sum of squares SS, means squares MS, F: Overall F test for the null hypothesis and Significance F which is the associated P-value.

SS= 837.91
MS=418.95

F= 9.82, significance F = 0.0029

- Regression equation

From the third table in the summary output we find the equation of regression. The regression equation is the same for all the values of α;

The population regression model is: $Y = \beta_1 + \beta_2 x_2 + \beta_3 x_3 + e$ (It is assumed that the error u is independent with constant variance), so we wish to estimate the equation of the form:

$Y = \beta_1 + \beta_2 x_2 + \beta_3 x_3$;

Where:

Y: Inflation

β_1: intercept

β_2: Slope of regression line with respect to x_2 (it shows how much Y will change with one unit change of

x_2)

x_2: GDP, first independent variable

β_3: Slope of regression line with respect to x_3 (it shows how much Y will change with one unit change of

x_3)

x_3: Money supply, second independent variable

E: error

From the summary output, the last table shows us the intercept and each variables coefficient. We find our equation to be:

Y(hat)= 81.13 -0.28x2 + 0.1x3

This equation shows that if money supply and GDP are 0 than Inflation would still change with

81.13. This means that there are *other factors indicating inflation* (especially in our post-communism period up to 2008). With one unit increase in GDP inflation will decrease by 0.28 and with one unit increase in money supply it will increase by 0.1.

Testing the significance of *correlation coefficient (r)*

The correlation coefficient computed from sample data measures the strength and direction of a linear relationship between two variables.

After we have found the correlation coefficient using Excel Data Analysis we have to test is it is significant or not.

Since r is used for single correlation we firstly take into consideration the dependent variable which is Inflation and first independent variable GDP. Stating the hypothesis we have:

H_0: $\rho=0$, there is no relationship between inflation

and GDP H_1: $\rho\neq0$, There is a relationship

We have to test this for all three confidence intervals (Alpha 0.01, 0.05 and 0.1) Degrees of freedom are: n-2= 15-2 = 13

With this information we can find the critical values and compute the t test.

When alpha= 0.1

Critical value= ±1.771 (using table F) Then we find the t-test.

r= -0.65 (taken from Excel)

Using the formula $t = r\sqrt{\frac{n-2}{1-r^2}}$ we find that t= -3.08

Lastly we compare the t value and critical value. Since t value is greater that critical value it means that It falls in the critical region. *We reject H0* because there is not enought evidence to support it, meaning that there is a relationship between variables.

When alfa=0.05

Critical Value= ±2.160 T test = -3.08

Albanian economy after 2008, an overall look

In 2008, in the financial market occurred the most dangerous crisis since the Great Depression in 1930. This great crisis started in United States of America when all the home prices had a really quick downturn leading some big companies and financial institutions bankrupt. The worlds financial crises in 2008 left some marked wounds in different countries economies. We, as developing countries, having a high percentage of our GDP provided by the remittances and migration level, had a sharp fall in the economic growth. It has been one of the most difficult situations to overcome since the fall of communism leaded by Enver Hoxha. As any other financial crisis there are a lot of literature reviews and researches about the causes and results in the everyday life of every country especially in the economic market. Although Albanian economy seemed to be facing this wave of financial problems very well since the inflation level had stayed in the target level from the Bank of Albania as 2-4% and the economic growth (GDP) 8%. The problem would come after 2008 where all the GDP helpers coming from abroad reduced sharply. Remittances fell in considerable amounts. The graph in the end of the section shows the amounts for five years: 2006-2010.

Remittances helped the economic stability in our country in the period of transition more than any other macroeconomic factor. Migrants mainly relied at the working sector of Italy and Greece, mostly Greece. This country seemed to be facing the financial crisis in the worst way possible, not like any other country. Greece was forced to sell some of its most touristic islands in order to cover the debt and the pressure pursued by the European Union. The global economic crisis that made Greece behave in this way, made Albania deal with some very difficult issues such were the income entering our country.

They kept increasing in the period of 1991-2002 but had the sharp fall in the period of global economic crisis. The fall in the remittances amount in the period of global financial crisis didn't lead to a sharp fall in the GDP. This happened because the gap created by the missing remittances was filled by saving the trade balance with renewable sources and chromium which in fact is founded in high amounts in some particular cities of Albania. Also the increase in the FDI (Foreign Direct Investment) helped the governance to deal with all that the fallen income from migrant workers. Increase of Foreign Direct Investment wasn't made by big dealers investing in our country but by a large number of small investors, usually Albanians coming to their home country and trying to help our economy through investment.

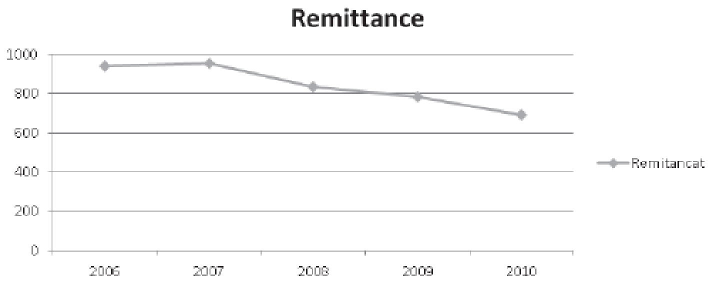
They believed in their self employment and they reached it. It was like a big investment but only separated in many pieces. In this case people helped the economy just by themselves. The problem consisting in the case is that the self-employment is just temporary. No one could promise a continuing process. Another problem was the trade balance. Even though the government was trying to balance it anyhow with all the alternative choices there was still an existing gap between the remittances and the trade balance. The trade balance seemed to go deep in debt as presented by the annual reports of National Bnk of Albania.

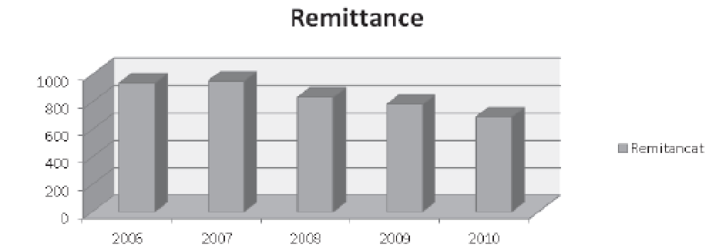
Up to now, 2015, Albania is doing the best to overcome what was left by the most dangerous financial after the 2nd World War. The greatest efforts are being applied by Albanian citizens who are working on different sectors of economy. Some of them with agriculture and farming, some others with renewable sources and different natural resources. One thing is sure; there is a long way for us to recover from the wounds of communist regime and different financial fluctuations since we are not a great power in the world market. We are just a small country desiring to live in the standards of the European Union citizens.

Table 1

Year	2006	2007	2008	2009	2010
Remittance	937,2	951,7	833,3	781,3	689,8

Graphics 4





Source: Annual reports of the National Bank of Albania, 2012

Conclusion

Among many other indicators, from the regression model we applied we understand that there is a moderate relationship between GDP, money supply and Inflation in Albania during 1994-2008. In other perspectives and political conditions inflation and GDP are positively correlated and Money Supply is the main factor that causes Inflation to rise. In Albania is not the same case because of high inflation values. The negative moderate linear relationship is due to the size of values and factors affecting the economy of a country. Just like the authors that have previously stated that high inflation leads to a decrease of economic growth, we also provide the appropriate evidence on the Albanian case after the communist regime. Even though we conducted so many statistical test and almost all of them show that there is a relationship between these variables, there is still a chance that this entire relationship is due to chance and that is the beauty of statistics.

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Appendixes

Year	**Inflation**	**GDP**	**Money Supply**	**Year**	**Inflation**	**GDP**	**Money Supply**
1994	22.565	265.027	97.397	**2002**	5.218	423.557	446.119
1995	7.793	288.614	113.31	**2003**	2.344	448.011	474.238
1996	12.734	314.878	175.401	**2004**	2.869	473.59	532.106
1997	33.166	282.76	241.769	**2005**	2.363	500.865	605.032
1998	20.646	318.671	279.26	**2006**	2.371	528.067	704.126
1999	0.39	350.857	326.017	**2007**	2.937	559.223	828.271
2000	0.039	376.469	377.18	**2008**	3.359	601.368	907.11
2001	3.121	406.362	412.867				

Table1: Data

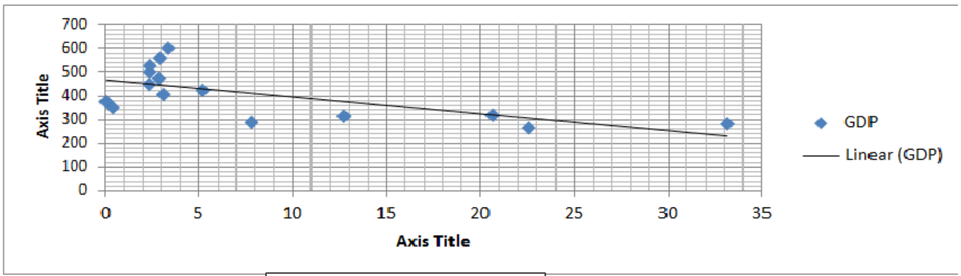

Table2. Scatter plot GDP

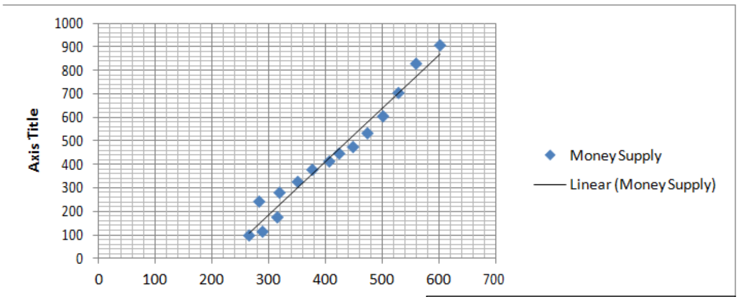

Table3. Scatter plot Inflation

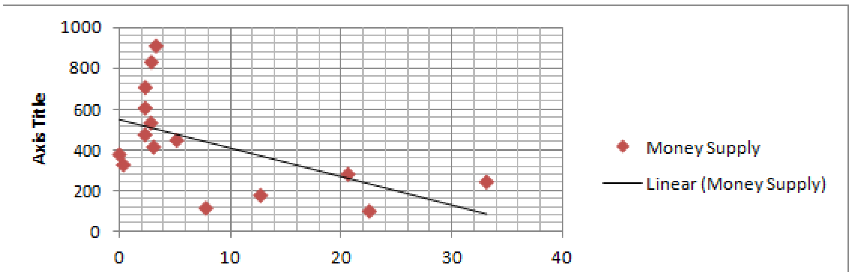

Table4. Money Supply

	Inflation	*GDP*	*Money supply*
Inflation	1		
GDP	-0.648969367	1	
Money Supply	-0.557963723	0.983683378	1

Table5: Correlation