THE RELATIONSHIP BETWEEN

UNEMPLOYMENT AND INFLATION IN ALBANIA

by

Ermelinda Tarelli, MSc

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Author: Ermelinda Tarelli, MSc

Qualification: Master of Science

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Department: Political Science and International Relations, Banking and Finance

Faculty: Economics and Administrative Sciences

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I certify that this thesis satisfies all the legal requirements as a thesis for the degree of Master of Science (MSc).

Assist. Prof. Dr. Urmat Ryskulov

Head of Department

I certify that I have read this study that is fully adequate, in scope and quality, as a thesis for the degree of Master of Science (MSc).

Assist. Prof. Dr. Urmat Ryskulov

Supervisor

Exam Board of Thesis

Thesis Title: The relationship between unemployment and inflation in Albania

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Members

(Title, Name and Signature) ……………………….

(Title, Name and Signature) ……………………….

(Title, Name and Signature) ……………………….

Abstract

This master thesis is aiming to analyze the relation between unemployment and inflation in Albania. This relation is described by the economist A.W. Philips who claims to have a reverse relation between them. If the Philips curve is applied even in Albania is still to be seen. For that reason this paper firstly analyzes the characteristics and trend of unemployment and then the trend of inflation in Albania. In the end the relation between the two of them is studied. The data for unemployment and inflation are taken from official sources, such as the statistics of INSTAT and World Bank for a period of ten years from 2000 to 2010. In this thesis the relationship between the unemployment (IV) and the inflation (DV) is analyzed using the linear regression analysis. The relationship between these two variables is negative but weak. The analysis is carried out using the statistical program SPSS.

Key words: Unemployment, Inflation, Philips curve, Monetary Policy, Albania.

Abstrakt

Kjo tezë masteri synon të analizojë lidhjen ndërmjet papunësisë dhe inflacionit në Shqipëri. Kjo lidhje është përshkruar nga ekonomisti A. W. Philips i cili pohon se ka një lidhje inverse ndërmjet tyre. Në qoft se kurba e Philipsit gjen aplikim dhe në Shqipëri kjo mbetet akoma për tu parë. Për këtë arsyje ky punim së pari analizon karakteristikat dhe trendin e papunësisë dhe pastaj trendin e inflacionit në Shqipëri. Në fund studiohet lidhja ndërmjet tyre. Të dhënat për papunësinë dhe inflacionin janë marrë nga burime zyrtare, si statistikat e INSTAT dhe Banka Boterore për një periudhë dhjetë vjet nga 2000 deri në 2010. Në këtë punim lidhja ndërmjet papunësisë dhe inflacionit është analizuar duke përdorur analizën e regresionit linear. Lidhja ndërmjet këtyre dy variablave është negative por e dobët. Kjo analizë është bërë duke përdorur programin statistikor SPSS.

Fjalët kyçe: Papunësia, Inflacioni, Kurba e Philips-it, Politika monetare, Shqipëria

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Furthermore, I am thankfully to all the other professors of Epoka University who have contributed in my general academic formation.

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Declaration Statement

1. The material included in this thesis has not been submitted wholly or in part for any academic award or qualification other than that for which it is now submitted.

2. The program of advanced study of which this thesis is part has consisted of:

i) Research Methods course during the undergraduate study

ii) Examination of several thesis guides of particular universities both in Albania and abroad as well as a professional book on this subject.

Ermelinda Tarelli

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List of abbrevations

BoA: Bank of Albania

DV: Dependent variable

GDP: Gross Domestic Product

IMF: International Monetary Fund

INSTAT: Instituti i Statistikave

IV: Independent variable

Msc: Master of Science

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Introduction

During the communism years the official data indicates a healthy economic picture. Unemployment and inflation were officially at the rate zero per cent. After the collapse of the centralized and planned economy GDP has fallen drastically (respectively -10 per cent in 1990, -28 per cent in 1991, - 7.2 per cent in 1992[1]). A large number of the state owned enterprises came to close and cooperative system in agriculture stop existing.

In this paper will be analyzed the relation between unemployment and inflation. One of the economists most known that has shown this relation is A.W. Philips. He observed that one stable curve represents the trade-off between inflation and unemployment and they are inversely/negatively related. In other words, if unemployment decreases, inflation will increase, and vice versa.

The Philips curve is mainly useful for two main reasons[2]:

4. Setting interest rates: If the institution responsible for the monetary policy believes that the labor market can operate with a lower rate of unemployment without the economy risking a big rise in inflation, then the Central Bank may be prepared to run their monetary policy with a lower rate of interest for longer. This has knock-on effects for the growth of aggregate demand as lower interest rates work their way through the transmission mechanism.

4. Forecasts for economic growth: Secondly the trade-off between unemployment and inflation affects forecasts for how fast the economy can comfortably grow over the medium term. This information is a vital for the government when it is deciding on its

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[1] http://www.economywatch.com/economic-statistics/Albania/GDP_Growth_Constant_Prices_National_Currency/ seen oct. 6 2013

[2] FThe Phillips Curve, A 2 Macroeconomics / International Economy, http://www.tutor2u.net/economics/revision-notes/a2-macro-phillips-curve.html, accessed date: 20.01.2013

key fiscal policy decisions. For example how much they can afford to spend on the major public services education, health, transport and defense. Forecast growth affects their expected tax revenues which together with government spending plans then determine how much the government may have to borrow (the budget deficit).

The fist part of this paper studies unemployment in Albania. A general view of the unemployment over the years is given. Some of the statistical data about unemployment are interpreted. The rate of unemployment is decreasing but it is still in the level of two digits. So there is still a lot to do to decrease this rate.

The second part is about inflation. It is really important for an economy to keep inflation under control. In Albania the institution responsible for controlling inflation is BoA. The inflation target is measured by the annual rate of change in the total Consumer Price Index. In quantitative terms, the Bank of Albania defines price stability as the keeping of an inflation rate at 3.0 percent, with a tolerance band of ± 1 percentage points.[3] Some fluctuations are noticed at the inflation rate especially during the periods of turmoil like that of the first year of transition and the year of 1997 in which inflation achieved high rates. But Albania soon recovers from these events and now inflation is under control.

The third part shows the relation between unemployment and inflation in Albania. According to the data this relation is very low and this because of some reasons which are mentioned below. Lastly some measures to overcome high rates of unemployment and of inflation are described.

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[3] Bank of Albania, Monetary Policy, About Inflation,
http://www.bankofalbania.org/web/About_Inflation_5266_2.php, accessed date: 20.01.2013

CHAPTER ONE: THEORITICAL APPROACH

Macroeconomic policies are implemented in order to achieve government's main objectives of full employment and stable economy through low inflation. We can use Philips Curve as a tool to explain the trade-off between these two objectives.

Philips Curve describes the relationship between inflation and unemployment in an economy. You already know that the Inflation is defined by increase in the average price level of goods and services over time. When there is inflation, value of money falls. A low inflation rate indicates that the average price of goods would not rise as high. Unemployment exists when someone is actively seeking for job but unable to find any despite their willingness to accept the going market wage rate.

The Phillips curve is named after New Zealand–born economist A. W. Phillips. In 1958 Phillips observed a negative relationship between the unemployment rate and the rate of wage inflation in data for the United Kingdom.

The Phillips curve that economists use today differs in three ways from the relationship Phillips examined. First, the modern Phillips curve substitutes price inflation for wage inflation. This difference is not crucial, because price inflation and wage inflation are closely related. In periods when wages are rising quickly, prices are rising quickly as well. Second, the modern Phillips curve includes expected inflation. This addition is due to the work of Milton Friedman and Edmund Phelps. In developing early versions of the imperfect information model in the 1960s, these two economists emphasized the importance of expectations for aggregate supply. Third, the modern Phillips curve includes supply shocks. Credit for this addition goes to OPEC, the Organization of Petroleum Exporting Countries. In the 1970s OPEC caused large

increases in the world price of oil, which made economists more aware of the importance of shocks to aggregate supply.[4]

The relationship we discussed above is a phenomenon in the short-run. But in the long run, since unemployment always returns to its natural rate, there is no such trade-off. The non-accelerating rate of unemployment (NAIRU) is sometimes referred as a "long-run Philips curve". NAIRU is the specific level of unemployment that exists in an economy that does not cause inflation to increase. It often represents an equilibrium between the state of the economy and the labor market.[5]

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[4] Mankiw. N. G., Macroeconomics, chapter 13 pp 380
[5] http://www.investopedia.com/terms/n/non-accelerating-rate-unemployment.asp accessed date 01.03.2014

CHAPTER TWO: LITERATURE REVIEW

This paper is based on the work of many scholars that have given their contributions on the study of unemployment, inflation and relationships between them. The contribution of many Albanian scholars on the economic developments in Albania especially related to unemployment and relation has been an available asset for this paper.

2.1 Literature review on Unemployment

Aspects of the labor market in the Albanian transition a qualitative and quantitative approach is a paper by Mytkolli et al (2000) In this paper the new phenomenon for the Albanian society, unemployment is studied. The inefficiency of the communist system brought the country into an economic and social collapse at the end of the 80's. This collapse caused an explosion of unemployment, which caught high quotes of more than one third of the labor force. The causes of such a burst are studied and at the same time a statistical analysis of the problem is carried out using a two-sided strategy to prove for stationary. The paper concludes that this phenomenon suffered from the strong form of the persistence-hysteresis.

Unemployment is an article written by Forstater (2002), who is the director of Center for full employment and price stability in University of Missouri-Kansas city. In this paper Forstater predicts that in a post-capitalist society the employment-money link will be severed and a new mode of social and economic organization will make unemployment extinct and irrelevant.

European unemployment: The evolution of facts and ideas is a paper written by Blanchard (2005). The purpose of this paper is to review the developments, both on the unemployment and the theory fronts, and gives an assessment of where we are today.

The social consequences of unemployment written by McClelland (1998) is mentioned that the personal and social costs of unemployment include severe financial hardship and poverty, debt, homelessness and housing stress, family tensions and breakdown, boredom, alienation, shame and stigma, increased social isolation, crime, erosion of confidence and self-esteem, the atrophying of work skills and ill-health. Unemployed people report that being unemployed is one of the worst things that can happen to them (White 1991).

Economic growth and the unemployment rate is a paper written by Levine (2013) who is a specialist in the labor economics. In this paper is mentioned that a persistently high unemployment rate is of concern to Congress for a variety of reasons, including its negative consequences for the economic well-being of individuals and its impact on the federal budget. After most postwar recessions, it took at least eight months for the unemployment rate to fall by one full percentage point.

2.2 Literature review on Inflation

The effectiveness of monetary policy in Albania and the need for further reform is a paper by Bolle et al (2004) which assesses the Bank of Albania's effectiveness by analyzing conventional monetary policy transmission mechanisms and by analyzing evidence of inflation expectations. Furthermore, it explains the differences in long-term interest rates between hard currencies and the Albanian Lek as tentative evidence that

inflation expectations have not yet stabilized at a low level, despite the fact that inflation has been low and stable in recent years.

Inflation, exchange rates and the role of monetary policy in Albania is a paper written by Muco et al (2004) with the help of European Bank for reconstruction and development This paper examines monetary policy in Albania during the transition period. Various channels through which monetary policy can affect prices and output are identified and their relative importance is assessed. The move during 2000 from direct to indirect instruments of monetary control has been associated with greater predictability of the transmission link from money supply to inflation. The paper concludes that a move to formal inflation targeting could help promote the transparency and credibility of monetary policy, but that such a move should be introduced only when the country is ready for it.

Reasons that pushed Albania to Inflation targeting is a paper by Kodheli (2007) in economic department in the University of Verona. This paper concludes that the nominal anchor used by the Bank of Albania in the last decade to control inflation has been money supply. The recent wake up of banking sector in Albania has urged BoA to reconsider the actual regime, as it may become inappropriate in attaching inflation expectations effectively in the future. As a result inflation Targeting was considered as the most appropriate alternative.

International Monetary Fund IMF Institute, Reducing inflation: Lessons from Albania's Early Success is a paper prepared by McNeilly et al (1998). This paper states that the early success in curbing inflation is attributed to the extremely broad scope of the

initial price liberalization coupled with key supporting measures. It also gives hope for early recovery from Albania's 1997 economic crisis.

Inflation targeting: A new framework for monetary policy? is a paper written by Bernanke et al (1997). This paper describe how inflation targeting has been implemented in practice and argue that it is best understood as a broad framework for policy, which allows the central bank "constrained discretion," rather than as an ironclad policy rule in the Friedman sense. This paper also discusses the potential of the inflation-targeting approach for making monetary policy more coherent and transparent, and for increasing monetary policy discipline.

UK Phillips curves and monetary policy is a paper written by Haldane et al (1999). This paper documents some stylized facts on evolving UK Phillips curves, and shows how these differ from their US versions. It interprets UK Phillips curve dynamics in a positive theory of monetary policy how policy-maker attitudes on the Phillips curve have evolved since the 1950s rather than, more traditionally, as interaction between exogenous demand and supply disturbances. The paper also suggest that correlations suggesting an extreme favorable unemployment-inflation tradeoff might indicate not something to be exploited but instead only policy-makers' correctly acknowledging that no tradeoff exists.

2.3 Literature review on the relationship between unemployment and inflation

Inflation and Unemployment: What is the connection? is a paper by Cashell (2004) who is a specialist in Quantitative Economics Government and Finance Division. This paper concludes that a policy goal which can only be temporarily realized is only

likely to satisfy those who have relatively short time-horizons. In isolation, an unemployment rate of 4% might seem like a good thing, but if it can only be had at the cost of spiraling inflation it may not seem like much of a bargain.

One of the articles of Vasudevan (2006) who teaches economics at Barnard College, questions the accuracy of the Philips theory relating to the relationship between inflation and unemployment. This article states that the experience of so-called stagflation in the 1970s, with simultaneously high rates of both inflation and unemployment, began to discredit the idea of a stable trade-off between the two. This article was taken from Dollars & Sense Magazine.

Equilibrium unemployment, job flows and inflation Dynamics is a paper written by Antonella Trigari (2004). In order to explain the joint fluctuations of output, inflation and the labor market, this paper first develops a general equilibrium model that integrates a theory of equilibrium unemployment into a monetary model with nominal price rigidities. Then, it estimates a set of structural parameters characterizing the dynamics of the labor market using an application of the minimum distance estimation.

Preferences over inflation and unemployment: Evidence from surveys of happiness is a paper written by Di Tella et al (2001). This paper studies reported well-being data on a quarter of a million people across 12 European countries and the United States. It shows that people appear to be happier when inflation and unemployment are low.

Inflation and unemployment in the long run is a paper written by Berentsen et al (2011). This paper studies the long-run relation between money (inflation or interest rates) and unemployment. It documents positive relationships between these variables at

low frequencies. The paper also develops a framework where money and unemployment are modeled using explicit micro foundations, providing a unified theory to analyze labor and goods markets.

CHAPTER THREE: UNEMPLOYMENT AND INFLATION IN ALBANIA

3.1 Unemployment

Unemployment is one of the main problem that affect people. Unemployment lowers the standard of living and also causes psychological stress to people. "People who lose jobs, even if they eventually find new ones, suffer lasting damage to their earnings potential, their health and the prospects of their children. And the longer it takes to find a new job, the deeper the damage appears to be"[6]. "According to the Society for the Psychological Study of Social Issues' Policy Statement "The Psychological Consequences of Unemployment," the stress of unemployment can lead to declines in individual and family well-being."[7] It is not casual that one of the main topics used by politician during their campaign is about unemployment. To attract people to them they promise to create new employment opportunities.

The Albanian official data indicated that unemployment was inexistent before 1990. During communism the main goal was to provide full employment, whatever the cost. A total analysis of the labor market during this period (low productivity, rather equal wages, political administration and management, etc.) depicts that there was an inefficient usage and allocation of labor force and other sources of production in this period. This analysis clears up, the total falsity of the concept of the full employment policy in socialism.[8]

The collapse of communism caused the coming out of functioning of a considerable number of the state owned enterprises and coming to a close of some of

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[6] Appelbaum. B., The enduring consequences of unemployment
[7] APA., Psychological effects of unemployment and underemployment, http://www.apa.org/about/gr/issues/socioeconomic/unemployment.aspx, accessed date: 25.09.2013
[8] Mytkolli. A., Qirici. S., Aspects of the labor market in the Albanian transition a qualitative and quantitative approach, pg 22

them. In the meantime the cooperative system in agriculture stopped existing. The passage of Albania from a centralized and planned economy to a trade market economy was accompanied with an increase in the unemployment rate. The collapse of communism caused above all recessionary unemployment. But soon, the other type of classical unemployment appeared in the Albanian labor market.

In 1992 new reforms were undertaken to improve the performance in the labor market. The rate of unemployment is reduced but it is still in the level of double-numbers. The service sector played a crucial role in this fall of unemployment. However, this sector can not fulfill the needs of unemployed and those who will be unemployed. It is important to invest in the main sector, such as infrastructure and manufacturing in order to decrease the high rate of unemployment. But it is also substantial to improve the macroeconomic policies which care for unemployment's affairs.[9]

In the first year of transition a large number of the labor force left the country and went to the neighboring countries for some reasons, such as:

1. The difficult economic position of most Albanian families on the eve of the new economic system.

2. There was a great gap in the level of the wages in Albania and in the neighboring EC-countries, such as Italy and Greece.

3. Albania was in a good geographic position, which favors an easy migration to Italy, especially to Greece.

4. A large part of the people that were unemployed had no possibility to get a job in Albania because of the collapse of the economy. Furthermore, these people did

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[9] Mytkolli. A., Qirici. S., Aspects of the labor market in the Albanian transition a qualitative and quantitative approach, pg 26

not see any sign of a near improvement on the horizons of the employment affair.[10]

It is difficult to evaluate the real level of unemployment here in Albania because of some reasons such as the high level of the informal sector, the high level of migration of Albanian people from 1991, the high rate of hidden unemployment in agriculture sector, and the high number of unemployed that are not registered in the public employment services, etc. In the tables below are shown some statistical data about unemployment from 2000 to 2010 taken from INSTAT.

Table 1: Registered unemployment rate by sex

Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Registered unemployment rate	16.8	16.4	15.8	15.0	14.4	14.1	13.8	13.2	12.5	13.6	13.5
Male	14.9	14.2	13.6	12.9	12.4	12.1	11.8	11.2	10.4	11.5	11.2
Female	19.3	19.9	19.1	18.2	17.5	17.2	16.8	16.3	15.9	16.7	16.7

Source: INSTAT

Table 2: Registered unemployment by sex

Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Registered unemployment	215,085	180,513	172,385	163,030	157,008	153,250	149,794	142,871	140,599	142,068	142,761
Male	113,166	95,093	91,059	85,905	82,200	79,219	77,643	73,050	71,279	70,817	69,904
Female	101,919	85,420	81,326	77,125	74,808	74,031	72,151	69,821	69,320	71,251	72,857

Source: INSTAT

In the following years in contrast to first transition years and the happenings of 1997, the unemployment rate has little fluctuations and is decreasing slowly (as shown by

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[10] Mytkolli. A., Qirici. S., Aspects of the labor market in the Albanian transition a qualitative and quantitative approach, pg 22

the data in Table1). In the last five years unemployment is at an average of nearly 13 per cent. The rate of unemployment was at its lowest in 2008 with a percentage of 12.5. (my own calculations, data taken from Table 1)

According to the tables in Appendix 1 & 2 only a small percentage of these unemployed people receive unemployment benefits, which is social assistance granted to unemployed people according to the law only for the first year of unemployment. On the other hand the percentage of long term unemployment is significantly high. This group of people, because of the long time of disconnection from labor market, finds it difficult to be adapted to the new labor market needs. It is necessary to invest time and money on the training of long term unemployed people, in order to make them an active part of the labor market. For this reason, it is more convenient to keep the percentage of this group at a low level.

If the labor market is seen from the gender perspective, the reregistered unemployment rate of female is higher than that of male's. The lowest unemployment rate for male and female is registered respectively in 2008 with a percentage of 10.4 and in 2011 with a percentage of 14.3. The difference in unemployment rate between male and female in 2000 is 4.4 per cent while in 2011 this difference is only 1.9 per cent. This shows that females are becoming more active in the labor market. Even if we compare the decrease in unemployment in male from 2000 to 2011, this is estimated at 2.5 per cent while for female the decrease in unemployment from 2000 to 2011 is 5%. This highlights what it is mentioned above. (My own calculations, the data are taken from Table 1.)

Table 3: Registered unemployment by educational level

Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Up to 8/9 years school	104,604	89,309	87,297	86,910	84,066	81,845	81,273	77,009	74,962	76,056	76,978
Secondary	104,615	87,097	82,267	73,541	70,219	68,563	65,148	62,531	62,046	62,249	60,694
University	5,866	4,107	2,821	2,579	2,723	2,842	3,373	3,331	3,591	3,763	5,089

Source: INSTAT

In order to get a full picture of unemployment in Albania, it is necessary to study this phenomenon also according to the level of the education of unemployed people. According to the data shown at Table 3 the number of people with 8/9 years school and secondary school has decreased significantly. While the percentage of unemployment among people with a university degree has experienced a decrease from 2000 until 2005. This is was due to the need of the labor market for educated employees and the small number of under graduated employees at that time. From 2006 until 2010 the unemployment among university graduated started to increase. One of the main reasons for this increase was the high enrollment in universities (shown in Appendix 3) due to the process of liberalization of tertiary education. Another reason was the saturation of labor market with high education profile employers.

3.2 Inflation In Albania

Inflation is another important problem to the economy. As a definition inflation can be described as the rate at which the general level of prices for goods and services is

rising, and, subsequently, purchasing power is falling.[11] The inflation does not only decreases the economic growth but also puts a bigger burden on the poor people than on the rich ones because the poor ones have less possibilities to be protected against the consequences of inflation.

One of the main objectives of Bank of Albania is to achieve and maintain price stability to ensure economic growth, sustained macroeconomic balances in the country, improvement in the standard of living, as well as the safeguard of the financial stability of the system. In quantitative terms, the Bank of Albania defines price stability as the keeping of an inflation rate at 3.0 percent, with a tolerance band of ± 1 percentage points. The inflation target is measured by the annual rate of change in the total Consumer Price Index, calculated and published by INSTAT.[12] It is not only the responsibility of the central bank to keep the inflation at low levels but also other economic actors including international ones such as bank of the world, IMF, stock exchange, second tier bank should contribute in keeping inflation under control.

Like unemployment, inflation was officially inexistent during communism regime. The end of 80's indicated the collapse of the centralized and planned economy and the emergence of political and economic changes. The first years of transition were accompanied by an increase in the prices and therefore in the rate of inflation, an economic collapse, social disorder and widespread emigration. So some measure was taken to recover from this difficult situation through one year reform program. One of the main objectives of this program was to reduce annual inflation below 20 per cent, which

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[11]Investopedia, Inflation, http://www.investopedia.com/terms/i/inflation.asp#ixzz2IWq39STA, , accessed date: 20.01.2013

[12] Bank of Albania, Monetary Policy, About Inflation, http://www.bankofalbania.org/web/About_Inflation_5266_2.php, , accessed date: 20.01.2013

at that time was over 300 per cent. This program was supported by the International Monetary Fund (IMF) and other international institutions. Monetary policy at that time was based on direct instruments of monetary control. The Albanian economy soon recovers by quickly moving to a high GDP rate and falling inflation in conjunction with serious effort towards market reforms. This was attributed to the extremely broad scope of early price liberalization and also to some other complementary policies including (1) measures to foster competition and an early supply response; (2) substantial external assistance; and (3) the implementation of restrictive financial policies. However, in early 1997 Albania passed through a period of turmoil and near-anarchy because of the collapse of pyramid schemes, into which much of the population had put their savings. This event caused nearly the same consequences as those at first year of transition, the increase in inflation and unemployment. After that, the Albanian economy has again achieved high annual growth rates and low inflation in an environment where financial sector development is still at an early stage and informal markets are flourishing. Consumer price inflation changed from more than 40 per cent to around 3 per cent after the 1997 burst of the pyramid scheme[13]

Table 4: Inflation rate

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Inflation, Consumer Price (annual %)	0.1	3.1	7.8	0.5	2.3	2.4	2.4	2.9	3.4	2.3	3.6

Source: The World Bank

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[13]Bolle. M., Meyer. T., The effectiveness of the monetary policy in Albania and the need for further reform, pg 20

Compared to the first transition years and the turmoil of 1997 when Albania experienced hyperinflation, the inflation rate from 2000 until 2010 is more stable with some little fluctuation. In 2000 Albania registered the lowest inflation which was 0.039 per cent and in 2002 the highest inflation of 5.218 was registered. Inflation (Average Consumer Price Change %) for Albania in year 2010 is 3.6 %. This makes Albania No. 95 in world rankings according to Inflation (Average Consumer Price Change %) in year 2010. The world's average Inflation (Average Consumer Price Change %) value is 4.73 %; Albania is 1.13 less than the average.[14]

3.3 The relation between unemployment and inflation in Albania

Many authors have written about the relation between unemployment and inflation. One of the most popular is the economist A.W. Philips. He has shown the relation in the short term of the wage inflation and unemployment. It is a reverse relation between these two when wage inflation rises, unemployment decreases and visa verse. Later, other authors extended it to the prices of goods and services. But in the long run this relation does not exist because the inflation goes toward expected inflation and unemployment toward natural rate of unemployment.

The tables (see appendix 4) show that the relation between unemployment and inflation in Albania is weak. This may be due to several reasons:

1) Inaccuracy in data. The inaccuracy in unemployment data comes from the high level of the informal sector, the high level of migration of Albanian people from 1991, the high rate of hidden unemployment in agriculture sector, and the high

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[14]Economy watch, Albania Inflation (Average Consumer Price Change %) Statistics, http://www.economywatch.com/economic-statistics/Albania/Inflation_Average_Consumer_Price_Change_Percentage/, accessed date: 20.01.2013

number of unemployed that are not registered in the public employment services. The political factor also contributes to the inaccuracy of the data. It has always existed a pressure from government on the institution that processed these data to make the situation appear better than it is. One of the biggest difficulties facing policy-makers in Albania is the poor quality of data available on the real sector.[15]

2) The Philips curve originally explained the relation between wage inflation and unemployment; if the wages rises the demand for labor will decrease resulting in higher unemployment. This is always true in a free labor market which is undistorted from informal labor market (grey and black labor market), bribery, corruption etc. However the inflation in this paper is not referred to the wage inflation but is measured by the consumer price index, relating more to the goods and services market. If a hypothetical situation is taken in consideration where unemployment is high, what will happen to the prices of the good and services, will they fall or increases? It is known that in high unemployment periods, the economical uncertainty increases so the population tends to save more. The increase in savings brings lower consumption of goods. In addition in periods of high unemployment the incomes are also low. As a result the purchasing power is reduced so the demand for goods shifts left upward while supply is less elastic in the short-run resulting to a new equilibrium where the quantity and price are lower. "The simple intuition behind this trade-off is that as unemployment falls, workers are empowered to push for higher wages. Firms try to pass these higher wage costs on to consumers, resulting in higher prices and an inflationary buildup

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[15] Muco. M., Sanfey. P., Taci. A., Inflation, exchange rates and the role of monetary policy in Albania, pg:15

in the economy."[16] "As long as aggregate demand exceeds economic capacity, the unemployment rate will tend to fall, and vice versa. Similarly, demand in excess of the supply will tend to push up both wages and prices, so that rising prices tend to be correlated with falling unemployment."[17] As argued above there is also a situation where high unemployment rate may bring low inflation. This hypothetic case applies more to a country which produces the goods and services itself. The case of Albania is quite different. Albania is a country which relies on the import of many goods so the decrease of the demand will affect only the quantity of goods imported and not the price. The price is set for the country from which the goods are imported. In addition the less you import the higher the price. Let's take as an example the import of diesel. The price of diesel is set by the OPEC, which is a cartel that aims to manage the supply of oil in an effort to set the price of oil on the world market, in order to avoid fluctuations that might affect the economies of both producing and purchasing countries.[18] Secondly, the case above applies only to normal products which demand is elastic to the change in price. But, in the market of goods there are products such as bread, electricity, water etc. which are necessary for people's every day life. The demand of these goods is inelastic to the changes in price and even though the price increases this doesn't affect the demand because the need for these products is essential. Let's take the example of electricity. In our country the supply with electricity is a monopoly. The price of electricity in Albania has increased year to year. Even in

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[16] Vasudevan. R., Dollars & sense real world economics, http://dollarsandsense.org/archives/2006/0906drdollar.html, accessed date: 24.09.2013
[17] Cashell. B. W., Inflation and unemployment: What is the connection?, pg 7
[18] Investopedia, Organization of Petroleum Exporting Countries - OPEC http://www.investopedia.com/terms/o/opec.asp#axzz2J4zfbuhU, accessed date: 20.01.2013

time when the unemployment rate was high, times when people had low income and suffered many social problems.

3) In the long run the Philips curve is vertical to the unemployment rate, which means that the reverse relation between unemployment and inflation does not exist. Because in the long run the unemployment rate tends to go to the natural unemployment rate and inflation towards the expected inflation. "In the long run, the Phillips curve (PL) is vertical at the natural rate of unemployment, the only unemployment rate consistent with a stable rate of inflation."[19]

4) The distinctive characteristics of Albania. There has never been a reverse relation between unemployment and inflation in Albania, even during the communism years, the first transition years or other period of time where there have been a social, political and economical instability. For example during communism according to the official data of that time the unemployment and inflation where inexistent. While during the first year of transition and in the turmoil of 1997 both unemployment and inflation were at high rates. "The experience of so-called stagflation in the 1970s, with simultaneously high rates of both inflation and unemployment, began to discredit the idea of a stable trade-off between the two."[20] "If errors in inflation expectations are random and not systematic, then there will be no trade-off"[21]

As the relation between unemployment & inflation is very low there is no need to make a trade-off between these two. As a result the competent institutions can take

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[19] Cashell. B. W., Inflation and unemployment: What is the connection?, pg 10
[20] Vasudevan. R., Dollars & sense real world economics,
http://dollarsandsense.org/archives/2006/0906drdollar.html, accessed date: 24.09.2013
[21] Cashell. B. W., Inflation and unemployment: What is the connection?, pg 10

measures to reduce both unemployment & inflation. Some of these measures will be mentioned briefly below.

3.3.1   **Measure to reduce unemployment**

In the long term, effective policies to reduce the total level of unemployment need to encourage[22]

1. An improvement in the employability of the labor supply - so that the unemployed are equipped with the right skills to be competitive in the labor market. The focus of the policies should be on the improvement of occupational mobility of the labor.

2. An enhancement in the motivation of people to search and then accept paid work-this may be carried out by reforms in the tax and benefits system.

3. A sustained period of economic growth so that new jobs are being created - this requires an increase in the aggregate demand in order for business to increase their investments and as a consequence expand their human capital.

4. Improving skills and reducing occupational immobility. Policies should endow the unemployed with the skills they need to become active again in the labor market. Structural unemployment is the result of workers being occupationally immobile so upgrading in education and training will increase the human capital of these workers, and therefore give them a

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[22] Policies to reduce unemployment,
http://www.tutor2u.net/economics/content/topics/unemp/unemp_policies.htm, accessed date: 20.01.2013

better opportunity of taking the new jobs that become available in the labor market

3.3.2 Measure to reduce inflation

Investigating all the possible channels through which monetary policy could affect inflation in keeping it low through[23]:

1. Interest rates channel- money view; increasing the rate of saving (the opportunity cost of spending has increased)

2. Exchange rate channel; Inflation is positively related to the exchange rate. Exchange rate stability plays a key role in keeping inflation low.

3. Bank lending channel- credit view; discouraging borrowing by both households and companies. Business investment may also fall, as the cost of borrowing funds will increase. Some planned investment projects will now become unprofitable and, as a result, aggregate demand will fall. Higher interest rates could also be used to limit monetary inflation. A rise in real interest rates should reduce the demand for lending and therefore reduce the growth of broad money.

4. Inflation expectations channel; how public's expectations react to monetary policy decisions. The feasibility of defining the inflation expectations that economic agents form based on perceived data in the information economy appears to be an extremely important issue.[24] The expectations channel undoubtedly is a very important part of the transmission mechanism for the conduct of monetary policy.[25]

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[23] Kodheli. M., Reasons that pushed Albania to Inflation targeting, pg 23
[24] Loleyt. A., Gurov. I., The process of formation of inflation expectations in an information economy, pg 122
[25] Loleyt. A., Gurov. I., The process of formation of inflation expectations in an information economy, pg: 104

CHAPTER FOUR: DATA, METHODOLOGY AND ANALYSIS

4.1. Data Description

It is important for the institution (BoA) that carries out the monetary policy to know the relation between inflation and unemployment because a wrong monetary policy can lead to the increase of one of them with serious consequences for the economy of the country. It is important to keep unemployment at a low level but not at such level that can cause a continuous increase in inflation. So an adequate rate of unemployment can keep inflation under control. Even though in Albania this relation between unemployment and inflation is weak.

The statistical data of this thesis are taken from official sources such as INSTAT and Economy Watch. The data includes a period of time of ten years, from 2000 to 2010. The unemployment data are in numbers and in percentages. The inflation is measured by Average Consumer Price Change in percentage.

4.2. Methodology

This thesis uses the linear regression analysis to analyze the relationship between unemployment and inflation. The analysis is carried out using the statistical program SPSS. Both the data for unemployment and inflation used in the linear regression analysis are in percentage. The dependent variable in this analysis is inflation and the independent variable is unemployment.

4.3. Analysis and Results

R (the linear correlation coefficient which measures the strength and direction of the linear relationship between variables) is 0.054[a], which shows that there is not a strong relationship between the inflation (DV) and the unemployment (IV).

R^2 (Coefficient of determination which measures the proportion of variability in a data set that is accounted for by a statistical model) R^2 is 0.003 which means that 0,3% of the criterion variable are accounted for by the model used.

Adjusted R square (the amount of shrinkage if this is applied to another sample, in other words the amount of predictive loss) is -1.08, which means that the linkage between the two variables is negative and relatively strong. The adjusted R square is considered the most accurate among these three components.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.054ª	.003	-.108	1.45029	.003	.026	1	9	.875

a. Predictors: (Constant), Inflation

Beta coefficient also called standardized coefficient refers to how many standard deviations a dependent variable (inflation) will change, per standard deviation increase in the predictor variable (unemployment). A change per 1 unit in the dependent variable (inflation) will bring a negative change (decrease) per 0.054 in the independent variable (unemployment). This also confirms that the relationship between unemployment and inflation is very weak (appendix 4).

Conclusion

The unemployment in Albania has experienced strong fluctuation in two periods of time. The first one was immediately after the collapse of communism, when together with other negative consequences such as low economic growth, the destruction of physical capital, high inflation rate the labor market faced high level of unemployment. This due to the closure and destruction of the existed industry during communism and the coming out of functioning of the agriculture cooperative where most of the labor force was employed. The second event was the turmoil of 1997, where the consequences were more or less the same. Since then the unemployment rate has decreased but still is high.

Albania has suffered the highest rate of inflation at about 300 percent in the first year of transition, but thanks to the monetary policy and measures taken by BoA and international institutions among which the key role was played by IMF, Albania recovered itself soon and managed to put the inflation back on track. The happening of 1997 brought Albania nearly in the same situation but only with two digit inflation, such as 40 %. Because of the inherited background Albania managed to overcome this difficult situation with little effort and in short period of time. Since then the inflation in Albania is in low rates with little fluctuation and in compliance with BoA's objectives.

According to the linear regression analysis the relationship between unemployment and inflation in Albania is negative but low. This due to several reasons:

1. Inaccuracy in data which is contributed mainly to the high level of informal sector, the lack of trust in employment state agencies and the political influence in the data.

2. The Philips curve is not very applicable in Albania because the Albanian economy relies mostly on trade and most of the products are imported. In addition the demand of essential goods does not change when a change in price happens.

3. The Philips curve is not valid in the long run.

4. The inherited characteristics of Albania. Albania has never experienced a situation where the correlation between unemployment and inflation was negative. For the Albanian case the opposite is true during the collapse of communism and the turmoil of 1997 when both inflation and unemployment were at high rates.

As the relation between unemployment & inflation is very low there is no need to make a trade-off between these two. As a result the competent institutions can take measures to reduce both unemployment & inflation

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7. http://www.tutor2u.net/

Appendixes

Appendix 1: Registered unemployment

Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Registered unemployment	215,085	180,513	172,385	163,030	157,008	153,250	149,794	142,871	140,599	142,012	142,761
Receiving unemployment benefit	21,894	14,322	11,184	11,276	11,125	10,306	11,135	11,137	9,369	9,010	9,265
In long term unemployment	192,724	165,656	160,466	150,992	144,959	142,143	137,049	123,943	91,949	93,369	89,269

Appendix 2: Registered unemployment (in %)

Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Receiving unemployment benefit	10.2	7.9	6.5	6.9	7.0	6.7	7.4	7.8	6.6	6.3	6.4
In long term unemployment	89.6	91.8	93.1	92.6	92.3	92.7	91.5	86.7	65.4	65.7	62.5

Appendix 3: Students enrolled on tertiary education

Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Male	16095	15790	16036	16420	20168	25129	30832	37312	39283	40596	52162
Female	24030	25069	26124	27180	32846	38128	43325	48866	50919	52610	64130
Total	40125	40859	42160	43600	53014	63257	74157	86178	90202	93206	116292

Appendix 4: Regression total unemployment rate with inflation

Descriptive Statistics

	Mean	Std. Deviation	N
Unemployment	14.4636	1.37788	11
Inflation	2.8000	1.98746	11

Correlations

		Unemployment	Inflation
Pearson Correlation	Unemployment	1.000	-.054
	Inflation	-.054	1.000
Sig. (1-tailed)	Unemployment	.	.437
	Inflation	.437	.
N	Unemployment	11	11
	Inflation	11	11

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Inflation[b]	.	Enter

a. Dependent Variable: Unemployment

b. All requested variables entered.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.055	1	.055	.026	.875[b]
	Residual	18.930	9	2.103		
	Total	18.985	10			

a. Dependent Variable: Unemployment

b. Predictors: (Constant), Inflation

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	14.569	.780		18.673	.000	12.804	16.333
	Inflation	-.037	.231	-.054	-.162	.875	-.559	.485

a. Dependent Variable: Unemployment