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Inflation and Unemployment Rates as Indicators of the Transition European Union Countries Monetary Policy Orientation

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***Abstract*—**Numerous studies carried out in the developed western democratic countries have shown that the ideological framework of the governing party has a significant influence on the monetary policy. The executive authority consisting of a left-wing party gives a higher weight to unemployment suppression and central bank implements a more expansionary monetary policy. On the other hand, right-wing governing party considers the monetary stability to be more important than unemployment suppression and in such a political framework the main macroeconomic objective becomes the inflation rate reduction. The political framework conditions in the transition countries which are new European Union (EU) members are still highly specific in relation to the other EU member countries.

In the focus of this paper is the question whether the same monetary policy principles are valid in these transitional countries as well as they apply in developed western democratic EU member countries. The data base consists of inflation rate and unemployment rate for 11 transitional EU member countries covering the period from 2001 to 2012. The essential information for each of these 11 countries and for each year of the observed period is right or left political orientation of the ruling party.

In this paper we use t-statistics to test our hypothesis that there are differences in inflation and unemployment between right and left political orientation of the governing party. To explore the influence of different countries, through years and different political orientations descriptive statistics is used. Inflation and unemployment should be strongly negatively correlated through time, which is tested using Pearson correlation coefficient.

Regarding the fact whether the governing authority is consisted from left or right politically oriented parties, monetary authorities will adjust its policy setting the higher priority on lower inflation or unemployment reduction.

***Keywords*—**Inflation rate, monetary policy orientation, transition EU countries, unemployment rate.

I. Introduction

MONETARY authorities in transition countries have high level of independence and there is a restriction of governing authorities to interfere in conduction of the monetary policy. However, during the observed period, inflation was not always in the acceptable limits, and especially not in the limits prescribed in Maastricht criteria. Considering that central banks in transition countries have to coordinate monetary policy measures with other fiscal policy measures governed by fiscal authorities, it will be showed how did this, with a given framework, and including changes in political orientation of the governing parties, influence the level of inflation and unemployment rate in transition EU countries. In this paper the assumption is that the conditions of the political environment after the change in executive authority in transition countries which are members of the EU are still specific to other EU member states. These circumstances can be a factor of different monetary policy implementation of the central bank.

Numerous researches in western democracies showed that ideological frame of the ruling party is an important factor in setting the higher or lower weight in choosing between the two macroeconomic goals, i.e. unemployment or inflation rate reduction.

One of the pioneers in theoretical approach based on theory of parties and on using the Phillips curve is Douglas A. Hibbs [1]. In his work he proved that left-wing political parties set the higher weight on a combination of higher inflation with lower unemployment than right-wing political parties. Considering that conduction of the economic policy influences the income redistribution in a society, some members of a society do not find the type of policy irrelevant. Furthermore, it is this combination that leads to a better income distribution among the electors. Hibbs [2] on the example of USA came to a conclusion that with the unemployment increase the proportion of the poorest in the total income decreases, while the proportion of the richest increases. Therefore members of the lower middle class mostly choose left-wing political parties that as a goal in conducting the economic policy set the employment increase rather than inflation reduction. That point of view is supported by the fact that influences of inflation to income redistribution are less clear than the influence of unemployment. Moreover, Hibbs [1] considers that inflation can have an influence on income redistribution in USA, however from richer to poorer.

Minford [3] defines important reason why the right-wing political parties are more interested in inflation rate than in unemployment rate reduction. Namely, using this type of economic policy, right-wing political governments dam to preserve the real value of assets, which is mostly the property of higher middle class. The similar effects of inflation can be found in Great Britain.

Alesina [4] and Alesina and Sachs [5] have introduced in

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their model the rational expectations of economic participants. They concluded that the results of an expansionary economic policy are reflected in a higher inflation rate; however, with a very small benefits for real economic activity and in a short time period. This view is also supported by Minford and Peel [6]. Uncertainty about the election victory of getting a new mandate between political parties creates always uncertain expectations of the economic participants. If the public expects the election of left-wing parties, it also can be expected future inflation rate above the current. However, some macroeconomic variables that are set before the election can not be immediately changed so quickly after the change of government. Theory of parties with rational expectations argues that after getting the mandate, public expectations will be more consistent with the new political - economic measures and the level of economic activity will return to its natural level. The authors argue that if the newly formed government was right-oriented, then inflation will remain low. However, if the newly formed government was left-oriented, a new expansionary economic policy will affect the increase in the level of economic activities above the natural level, and when the expectations of economic participants adjust inflation would remain high.

Kydland and Prescott [7] and Barro and Gordon [8] reported that left-leaning governments have a reputation to be more committed to combating unemployment, therefore the public expects a higher rate of inflation. If the left-wing government announced to combat inflation together with a reduction in the unemployment rate, it would not be credible and would at some point come to the point of choosing between putting weight on reducing inflation or on reducing unemployment. Left-leaning government would resolve such a dilemma by discretionary decision and inflation surprise in order to combat unemployment. There is a danger that the public expects higher inflation, leading the newly formed government in a position to adapt to such expectations to avoid a recession. The result of such games can be "the capture" of the economy with inflation whose equilibrium is at a higher level. Therefore, the expansionary policy of the newly formed government could lead to a higher inflation and unemployment in future periods of its mandate. The theory of parties and the theory of parties with rational expectations basically believe that public attitudes are not short-term oriented. Furthermore, public preferences can be modified over time and the period of high inflation could increase inflation aversion of the public and turn the electorate to run over to the right.

Of course, there are other considerations that perceive the relationship between inflation and unemployment. One of the most important theoretical approaches takes into consideration the political - business cycles and essentially assumes non-ideological politicians and “myopic” voters. As a result of this behaviour there is a restrictive economic policy at the start of each government and expansionary economic policy before a new election, regardless of political differences of the parties in power. Thus Nordhaus [9] explains that politicians simply want to maximize their probability of re-election and thus follow an identical economic policy. Nordhaus model assumes that the decisions of the voters are mostly affected by the events immediately prior to the elections and that voters do not base their decisions on indicators from the "deeper past". Likewise, voters are not aware of economic laws that exist in the relationship between macroeconomic variables, especially between inflation and employment. That is why every politician will stimulate aggregate demand before the election, in which the consequences of such an expansionary policy will have a time lag and inflation will occur only after the elections. When this happens, the ruling party will implement the restrictive economic policies to fight inflation, and voters will forget what happened in the period prior to new elections.

Introducing the elements of rational expectations the political - business cycles theory is complemented. “A rational theory of political - business cycles” assumes non-ideological politicians but rational voters. In this sense, Cukierman and Meltzer [10], Rogoff [11] and Rogoff and Sibert [12] complement the theoretical considerations of Nordhaus. They affirmed the correctness of his thinking even when it might not be considered that the voters are “myopic”, i.e. in the situation where they are imperfectly informed about their economic environment, the goals of policy makers or their ability to manage the economy. Specifically, by manipulating the specific instruments of economic policy in order to "embellish" certain economic indicators before the election and the problems remain to be solved after receiving the mandate, the politicians just before the election are trying to create the illusion of prosperity before voters realize they will have to pay the consequences after the election. It is favored by the fact that the informativeness of the voters regarding the already complicated process of budgeting is relatively low. According to this view, political - business cycles affect the budget deficit and the money supply, but have no clear impact on income and unemployment in the case of long-term cycle.

During the past decades, the other authors have also confirmed the strong correlation between left or right governing authority’s political orientation and the main monetary policy objective in their developed western democratic countries.

No matter that legal guideline of the transition countries allow their high level of central bank independence in monetary policy conduction; the reality can be much different. In the beginning of transition, governing authorities wanted to show to the public that reforms that were carried out would soon lead to the higher life standard, employment increase, etc. Therefore the political pressure was focused on expansionary monetary policy despite its well known repercussions from the past.

If the monetary stability is the primary goal of the monetary policy, it is extremely important to elect the central banks’ governor whose entire personality will guarantee the conduction of that particular policy, despite left or right orientation of the governing party. Legislation of all the observed transition countries clearly defines the obligation of high professional competence of the governor, vice governors and the council members and it clearly forbids them (and their

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family members) any commercial activities in commercial banks, membership in supervisory boards, etc. However, it is not always strictly defined how to isolate them from the political parties. Still Hungarian legal guidelines considering central bank are much clearer [13]: "Members of the Monetary Council of the MNB may only carry out their activities which are compatible with their central bank decision making duties. Such members may not hold office in political parties, may not carry out public activities on behalf of or in the interest of political parties, may not be representatives in Parliament or in local governments and may not be senior officers or public officials in the national or local government."

It is necessary to consider the importance of monetary stability as a primary objective of the monetary policy in the context of the implementation of the all parts of economic policy in order to achieve other objectives as price stability, economic growth, employment increase, etc. However, each observed country or a group of countries are special cases with its own economic priorities which are subject to change through time. If the economy of a country is in a depression, probably the higher weight would be set on the expansionary economic policy. Contrary, if the monetary instability is a bigger problem, most certainly the economic policy priorities would change and the higher weight would be on the price stability. Strong strengthening of the central bank independence in transition countries set different realities and positions in cooperation between fiscal and monetary authorities. However, this fact does not have to be an obstacle in their quality cooperation if the economic realities are properly perceived and economic laws accepted.

In the first part of the paper theoretical background including theory of parties, independence of the central bank and cooperation between monetary and fiscal authorities is explained. In the second part of the paper the orientation of monetary policy through interest rate and unemployment rate indicators, through countries and in period from 2001 to 2012 is inspected, in order to find differences between interest rates and unemployment rates in different political orientations. Finally, the main conclusions are given in the last part of the paper.

II. The Central Bank's Monetary Policy Implementation Depending on the Left or Right Oriented Governments – Case Study of the Transition EU Member Countries

Transition of the administrative-planning into a market-oriented economy set a specific frame to explore series of economic phenomena which are, by its features, unique in the whole historic period. Although transition process has not progressed at the same pace and with the same successes, transition countries that become EU members undoubtedly have a number of mutual links which makes them a unique group of countries, suitable for some economic researches. In this research, to a group of transition EU member countries including Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia, and Croatia is also added since it joined EU in July 2012. For the timeframe of the research, a period from 2001 to 2012 is included since the detachment from transition period was necessary. Moreover, in the given period the cumulative liberalization index of every observed transition country's economy is relatively high which means that a sufficient level of liberalization of economic flows has been reached in order to measure inflation and unemployment rate in market conditions.

TABLE I
Inflation Rates in Transition EU Member Countries from 2001 to 2012 in Total and Through Countries, Years and Parties

Variable	N	Inflation – Mean (%)	Inflation - Std.Dev. (%)
Total	132	4,63	4,21
		Country	
Bulgaria	12	5,48	2,90
Croatia	12	2,83	1,32
Czech R.	12	2,56	1,66
Estonia	12	4,28	2,66
Hungary	12	5,50	1,74
Latvia	12	5,09	4,35
Lithuania	12	3,18	3,15
Poland	12	2,96	1,40
Romania	12	11,10	9,10
Slovakia	12	4,06	2,47
Slovenia	12	3,88	2,39
		Year	
2001	11	8,22	9,00
2002	11	5,09	6,15
2003	11	3,83	4,69
2004	11	4,95	3,09
2005	11	4,07	2,28
2006	11	4,20	1,98
2007	11	5,15	2,66
2008	11	8,07	3,61
2009	11	2,57	1,76
2010	11	2,22	2,00
2011	11	3,72	1,27
2012	11	3,44	0,95
		Party	
right	83	4,31	2,58
left	49	5,16	6,04

Source: Authors

Data for the observed period and for the abovementioned countries is obtained from World Economic Outlook Database [14], and it includes inflation and employment rates, regarding the political orientation of the governing party, i.e. left or right.

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TABLE II
UNEMPLOYMENT RATES IN TRANSITION EU MEMBER COUNTRIES FROM 2001 TO 2012 IN TOTAL AND THROUGH COUNTRIES, YEARS AND PARTIES

Variable	N	Unemployment – Mean (%)	Unemployment - Std.Dev. (%)
Total	132	10,38	4,16
		Country	
Bulgaria	12	11,14	3,83
Croatia	12	12,52	2,52
Czech R.	12	7,00	1,15
Estonia	12	9,93	3,65
Hungary	12	8,10	2,19
Latvia	12	11,84	4,17
Lithuania	12	11,58	4,59
Poland	12	13,56	4,99
Romania	12	7,12	0,70
Slovakia	12	14,94	3,20
Slovenia	12	6,48	1,26
		Year	
2001	11	12,79	5,31
2002	11	12,25	5,06
2003	11	11,41	4,63
2004	11	11,26	4,35
2005	11	10,10	3,84
2006	11	8,51	2,98
2007	11	6,95	2,27
2008	11	6,56	1,66
2009	11	10,06	3,62
2010	11	12,11	4,35
2011	11	11,33	3,15
2012	11	11,24	2,90
		Party	
right	83	10,79	4,18
left	49	9,69	4,08

Source: Authors

In Tables I and II descriptive statistics (means and standard deviations) of inflation and unemployment rates is given. Out of 132 observations, including all abovementioned countries and timeframe from 2001 to 2012, inflation was on average 4.63% and unemployment rate 10.38%. In that period Romania had the highest inflation rate (11.10%) and Czech Republic the lowest (2.56%). The unemployment rate was the highest in Slovakia (14.94%) and the lowest in Slovenia (6.48%). Both inflation and unemployment rates were on their highest levels in 2001 (8.22% and 12.79% respectively) and since then they show similar pattern of firstly declining and afterwards it can be seen an upward trend. However, the inflation rate halved in two years and increased in level until it peaked in 2008, with the inflation rate reaching 8.07%. Since then it remained at low levels at around 3%. Unemployment plunged and halved in 7 years and reached its bottom in 2008 of 6.56%, however it went up to nearly its level from the year 2001 in only two years, and remained at roughly 11% since.

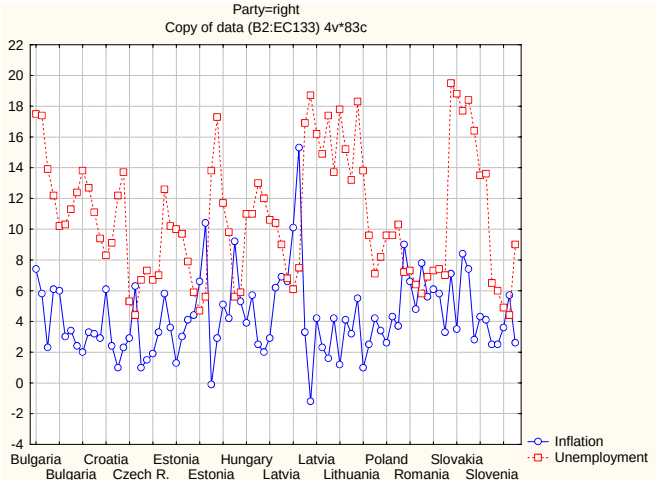


Fig. 1 Inflation and unemployment rates for transition EU member countries with right-wing governing parties from 2001 to 2012 in total and through countries, years and parties*
*First 8 data is for Bulgaria, which in this period, out of total 12 years, had for 8 years the right-wing governing party; second 4 data is for Croatia, which had the right-wing governing party for 4 years etc.

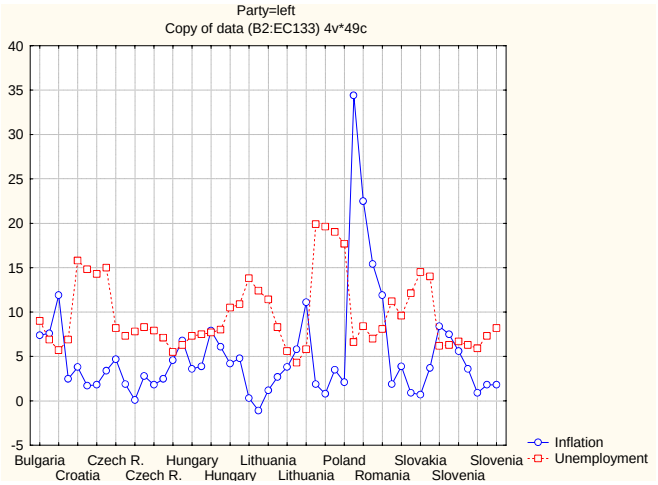


Fig. 2 Inflation and unemployment rates for transition EU member countries with left-wing governing parties from 2001 to 2012 in total and through countries, years and parties*
* First 4 data is for Bulgaria, which in this period, out of total 12 years, had for 4 years the left-wing governing party; second 8 data is for Croatia, which had the left-wing governing party for 8 years etc.

There were 83 periods with right oriented political parties characterized by, on average, lower interest rates (4.31%) and higher unemployment (10.79%), than in remaining 49 periods with left oriented political parties, with inflation and unemployment rates 4.16% and 9.69% respectively.

Figs. 1 and 2 show inflation and unemployment rates in observed period and for all countries separately for right and left political oriented governing parties.

As a good representative of the relation between inflation and unemployment regarding the governing party orientation is Bulgaria (Table III and Fig. 3).

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TABLE III
BULGARIAN INFLATION AND UNEMPLOYMENT RATES BY YEAR AND GOVERNING PARTY

Year	Party (N)	Inflation – Mean (%)	Unemployment – Mean (%)
	right (8)	4,55	13,15
	left (4)	7,35	7,13
2001	right	7,4	17,5
2002	right	5,8	17,4
2003	right	2,3	13,9
2004	right	6,1	12,2
2005	right	6	10,2
2006	left	7,4	9
2007	left	7,6	6,9
2008	left	11,9	5,7
2009	left	2,5	6,9
2010	right	3	10,3
2011	right	3,4	11,3
2012	right	2,4	12,4

Source: Authors

There were 8 periods with right oriented political party characterized by, on average, lower interest rates (4.55%) and higher unemployment (13.15%), than in remaining 4 periods with left-wing political party, with inflation and unemployment rates 7.35% and 7.13% respectively. In 2001 there was right-wing governing party which lowered inflation in its ruling period. It went up since 2006 when left-wing governing party came to power, peaked in 2008, and slump again in 2009. In 2010 the right-wing governing party came to power and it remained the inflation rate at its low levels of 3%. The unemployment rate was extremely high in periods when right-wing party was on power, but showed a slow declining trend. However, when the left party came to power the unemployment fell sharply and since 2010 when the right-wing governing party came to power it rose again remained at 12.4% in 2012.

Following figure (Fig. 3) shows inflation and unemployment rates for Bulgaria from 2001 to 2012.

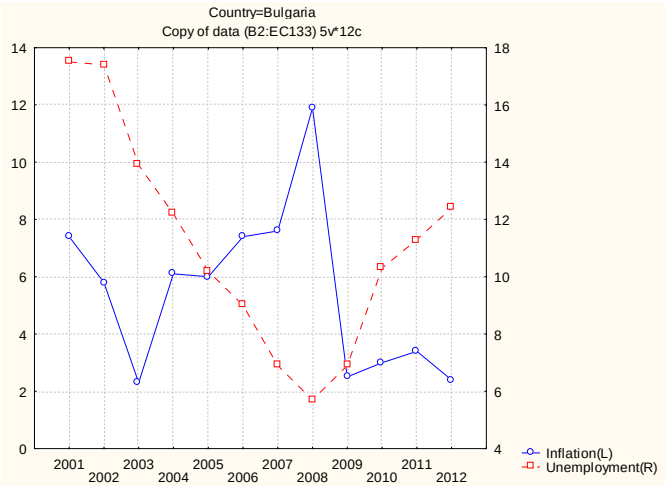


Fig. 3 Bulgarian inflation and unemployment rates from 2001 to 2012

The relation between inflation and unemployment rates regardless of political party on power for Latvia from 2001 to 2012 are presented in Fig. 4. It can be seen that the periods with higher inflation are followed by periods with lower unemployment rate and vice versa. Also the correlation between inflation and unemployment rate for Latvia is strong and negative (-0.7652) and it is statistically significant at 1% significance level.

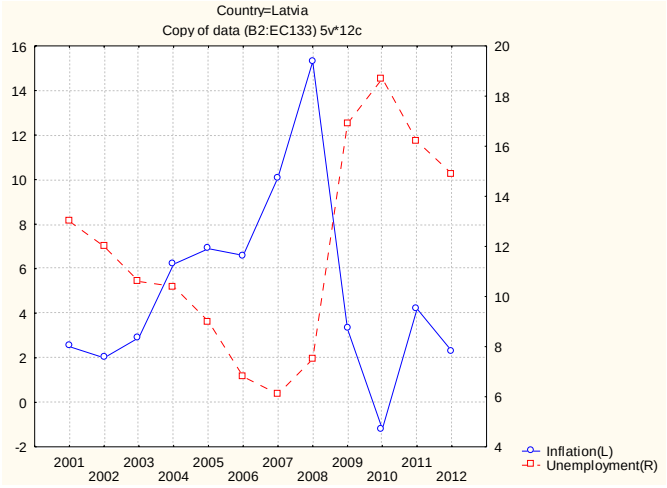


Fig. 4 Latvian inflation and unemployment rates from 2001 to 2012

Although there are obvious differences in inflation and unemployment rates considering the governing party orientation, there are no statistically significant differences neither in the average inflation (p-value equals 26.6%) of the left and right-wing governing parties, nor in unemployment rate (p-value equals 14.4%). The results of t-statistics are shown in Table IV. The reason for this might be in specific features of each country, and especially in selected period which is characterized by significant volatility in all macroeconomic variables due a period of expansion of all the economies in the beginning of the observed period. Latter recession in 2008 came, and the period of recovery ever since. In the period of crisis, regardless of the governing party, transition countries experienced strong changes in both inflation and unemployment rates.

TABLE IV
T-STATISTICS FOR INFLATION AND UNEMPLOYMENT RATES

	Inflation	Unemployment
Mean – right (%)	4.313	10.789
Mean – left (%)	5.159	9.691
t-value	-1.117	1.471
df	130	130
p	0.266	0.144
Std.Dev. – right (%)	2.58215	4.17776
Std.Dev. – left (%)	6.03811	4.07527

Source: author

Figs. 5 and 6 show Box&Whisker plot for inflation and unemployment regarding the left and right governing party. There are differences in the average inflation and unemployment rates regarding the political parties. However, the difference is applicative significant but not statistically

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significant as already shown in Table IV.

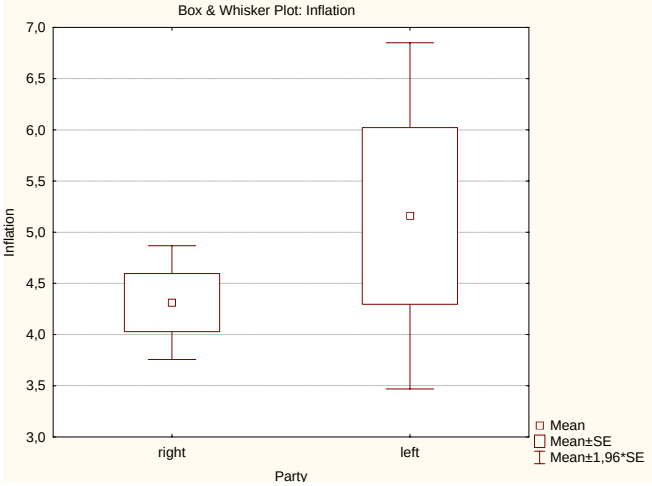


Fig. 5 Box & Whisker plot for inflation rate

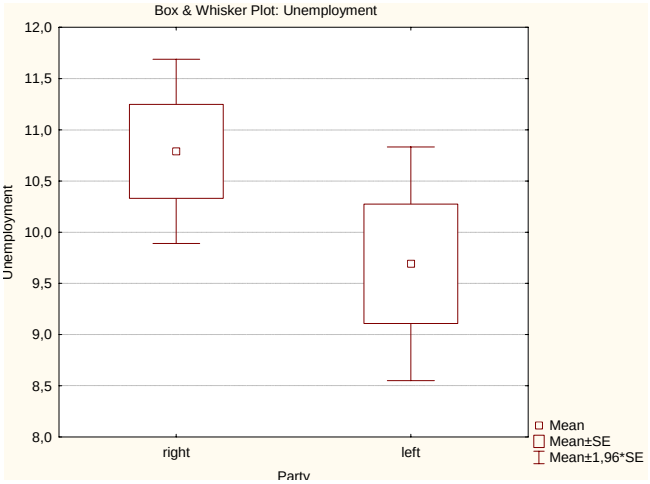


Fig. 6 Box & Whisker plot for unemployment rate

III. Conclusion

This paper deals with the results of the previous empirical researches that have confirmed the strong correlation between left or right governing authority's political orientation and the main monetary policy objective in developed western democratic countries. The executive authority consisting of a left-wing party gives a higher weight to unemployment suppression and central bank implements a more expansionary monetary policy. As opposed to that, right-wing governing party considers the monetary stability to be more important than unemployment reduction and in such a political framework the main macroeconomic objective becomes the inflation rate reduction. The main goal of this research was to investigate whether the same conclusion can be confirmed for transition countries. The dataset consists of inflation and unemployment rates for eleven transition EU member countries in the period from 2001 to 2012. The essential information for each of these 11 countries and for each year of the observed period is right or left political orientation of the ruling party. Analysis by countries confirms that for the most of them there are differences in the average inflation and unemployment rates regarding the governing parties' political orientation. However, economical and social circumstances between transition countries are different so that classical descriptive statistics indicators for the whole transition EU member countries sample are not representative. Hence, when observing inflation, which in this period, for right oriented governing parties amounted 4.31%, with standard deviation of 2.58%, while for left oriented governing parties it is even less representative, since standard deviation of 6.04% exceeds mean of 5.16%. Similar situation is with the unemployment rates, where the coefficient of variation exceeds 30% in both cases. That value of coefficient of variation, as a standard deviation to mean ratio, is generally accepted as an upper bound of representativeness of mean as a valid indicator. The analysis by year for each country itself and for the whole sample of transition EU member countries in the observed period shows significant influence of general economic trends and the world economic crisis. Therefore, the main hypothesis of this paper can be only partially accepted. Namely, the most of the countries truly show statistically significant differences between inflation and unemployment rates as indicators of their monetary policy orientation depending on left or right-wing political governing party. In some transition EU member countries; however, inflation and unemployment rates do not follow such trends. Namely, monetary authorities in transition countries have high level of independence and there is a restriction of governing authorities to interfere in conduction of the monetary policy. That is why the deviations related to indicators of representativeness commonly used in statistics are so high. This is the reason that unemployment and inflation rates are not statistically representative indicators for sample as a whole although for the most observed countries the same principles as those in western developed countries are valid. Anyhow, during the observed period in the most transition EU member countries statistical indicators related to inflation and unemployment rates undoubtedly show that the ideological framework of the governing party has a significant influence on the monetary policy orientation.

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