



Emerging Markets Queries in Finance and Business Conference

An Empirical Study on Fiscal Policy in crises time: Evidence from Romania and Turkey

Mihaela Gündör^a, Özay Özpençe^{b,*}

^a*Petru Maior University, Faculty of Economics, Juridics and Administrative Sciences, Tirgu Mures, 540088, Romania*

^b*Pamukkale University / Faculty of Economics and Administrative Sciences, Department of Public Finance, Denizli, 20070, Turkey*

Abstract

Based on the assumption that fiscal policy has an important role in government policy as a GDP determinant, which represents the main conclusion of our previous research, the aim of this paper is to characterize, explain and compare the properties of fiscal policy that government uses in time of crisis in two developing countries, Romania and Turkey. In order to achieve its goal, the study uses a pooled dataset consisting of annual observations over the crisis time. Even though a countercyclical fiscal policy is highly recommended from the theoretical point of view, the empirical evidence points to an extensive use of pro-cyclical fiscal policy. In this perspective, the paper provides some empirical basis for the argument that pro-cyclical fiscal policy does not assist in dampening the GDP shocks. Being focused on empirical, contextualized analysis, this study highlights the cyclical dynamics of macroeconomic aggregates and only offers conjectures as to the reasons behind the behavior of fiscal policy and its influence on the macroeconomic output.

© 2014 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/3.0/>).

Selection and peer-review under responsibility of the Emerging Markets Queries in Finance and Business local organization

Keywords: Fiscal policy; Pro-cyclical/Countercyclical Policy; Macroeconomic Output; Emerging Economies; Economic Crisis

1. Introduction

The contemporary economic crisis has revived the debate related to the importance of fiscal policy in dampening the GDP gap, given the limited room for monetary policy. Considering the importance of the public policy in contemporary developing economies, understanding the fiscal policy as an important determinant of the cyclical dynamics of macroeconomic aggregates can make a valuable contribution to the design of

* Corresponding author. Tel.: +40-723-370-505; fax: +4-026-526-275.

E-mail address: mihaela.gondor@ea.upm.ro

stabilization and economic growth program being a necessary condition for a satisfactory positive theory of business cycles.

Compared to the large literature on fiscal stimulus in developed countries, there has been less research on the behavior of fiscal policy in developing countries, in crisis time. In this perspective, the paper intends to explore the behavior of fiscal policy in crisis time in order to provide some empirical basis for the argument that pro-cyclical fiscal policy does not assist in dampening the GDP shocks. As a case study the authors took into account two countries considered “emerging economies”, Romania and Turkey. The study uses a pooled dataset consisting of annual observations over the crisis time. The administrative data survey for both countries is based on the author’s considerations that the outcome of an analysis is as reliable as the data collected to perform the analysis. In this perspective, the data sources are only official ones, like Eurostat and governmental statistics for the fiscal policy and macroeconomic aggregates.

The paper is built on the assumption that fiscal policy is the main instrument the government may use for influencing the macroeconomic output, which represents a conclusion of our previous research. The working hypotheses are: (h₁) the emerging countries/developing economies pursuit a pro-cyclical fiscal policy and (h₂) the pro-cyclical fiscal policy harms the economy.

Being focused on empirical, contextualized analysis, this study highlights the cyclical dynamics of macroeconomic aggregates and only offers conjectures as to the reasons behind the behavior of fiscal policy and its influence on the macroeconomic output.

The paper is structured as follows: Section 2 presents a brief literature review regarding the behavior of fiscal policy over the business cycle. Section 3 provides a brief characterization of Romanian fiscal policy in contemporary crisis time, using IMF, Eurostat and Romanian Ministry of Finance - statistical data. Section 4 provides evidence from Turkey during 2008 – 2012, using OECD, Turkish Statistical Institute, IMF, and Eurostat. Section 5 focuses on the results of the study and the last section concludes.

2. Literature Review

After 1960s, it can be said that compensatory fiscal policy is the most effective economy policy against today’s world crises. Patinkin, 1964, Blinder and Solow, 1973 established that government debt increases household’s wealth as positive effect on aggregate demand by expansionary fiscal policy. On the other hand, Kydland and Prescott, 1977 emphasize that dynamic time lag problem cause’s decrease effectiveness of discretionary fiscal policy to promote macroeconomic goals (full employment, price stability and economic growth). To prevent time lag problem, rules based fiscal policy (Maastricht Criteria in 1993) are recommended in all governments.

The contemporary economic crisis has shown that monetary policy may not provide a sufficient response and brought into discussion the importance of fiscal policy in dampening the GDP shocks Spilimbergo et al., 2008, Gosh et al., 2009, Baldacci et al., 2012. There are studies showing that during the contemporary crisis, governments around the world went beyond monetary policy measures by introducing large fiscal stimulus packages Freedmana et al., 2010.

According to the IMF, 2009, the fiscal costs of the recession will be involved through three channels: (i) automatic fiscal stabilizers, (ii) other non-discretionary effects going beyond the normal impact of the cycle and (iii) discretionary fiscal stimulus. In this circumstance the most important element for the resolution of the current crisis is “a clear strategy to ensure fiscal solvency”.

Using the IMF’s DSGE model, GIMF, to analyse two key questions that have arisen during the policy debate on fiscal stimulus (i.e. how effective is fiscal stimulus in the short run and how damaging is fiscal stimulus in the long run if it becomes permanent), Freedmana et al., 2010, concluded that “a carefully chosen package of fiscal and supporting monetary stimulus measures can provide a significant contribution to supporting domestic and global economies during a period of acute stress” with such a fiscal policy design which ensures that deficits and debt do not deepen permanently when the economy recovers, causing long-run costs which could exceed the short-run benefits. By confirming the results with simple regression analysis, Alesina and Ardagna,

2010, demonstrated that fiscal stimuli based upon tax cuts are more likely to increase growth than those based upon spending increases.

Regarding the debate on the subject of pro-cyclical vs. countercyclical fiscal policy, the scientific literature highly recommends the countercyclical fiscal policy (IMF, 2009; Dumitru and Stanca, 2010; Frankel et al., 2011, etc.). According to the literature, pro-cyclical fiscal policy means the policy which is expansionary in booms and contractive in recessions, being generally regarded as potentially damaging for welfare (Serven, 1998; World Bank, 2000; IMF, 2009). Keynes, 1936 defined a contractive fiscal policy as a government policy of reducing spending and raising taxes. The above cited studies argued that pro-cyclical fiscal policy raise macroeconomic volatility, depress investment in real and human capital, hamper growth, and harm the poor. The literature underlines that output and government spending is co-integrated, implying a long-term relationship between government spending and output (Akitoby et al., 2006; Christiano et al. 2011). According to the same authors, if government spending increases when there is a positive output gap (i.e., output is below its potential), then spending is counter-cyclical; if potential output were observable or easy to estimate, one could define counter-cyclicity as an above-average spending to output ratio whenever output was below its potential Akitoby et al., 2006. In this perspective the existing empirical literature provides weak support for developing countries and stronger support for industrial countries.

Some papers reveal that the cyclical behaviour of fiscal policy differs across countries by income group Frankel et al., 2011, developed economies being characterised by countercyclical fiscal policy and, in sharp contrast, emerging and developing countries by pro-cyclical fiscal policy Alesina et al., 2008; IMF, 2009; Dumitru and Stanca, 2010; Frankel et al., 2011; Vegh and Vuletin, 2012.

According to a study made by the Bank for International Settlements BIS, 2003, the standard theoretical Keynesian case for using countercyclical fiscal policy is not always applicable in emerging economies subject to large shocks, as small, or even negative fiscal multipliers may result if confidence is damaged and interest rates rise, crowding out domestic investment.

By studying the response of emerging economies to the global contemporary crisis, some researchers concluded that emerging economies did not fall more than developed economies and were able to conduct countercyclical policies, thus becoming more similar to developed economies Didier et al., 2012. Considering that, over the last ten years, a substantial number of emerging and developing countries “have graduated from fiscal pro-cyclicality to countercyclical fiscal policy” some researchers argued a strong causal link running from better institutions to less pro-cyclical/more countercyclical fiscal policy Frankel et al., 2011.

Reviewing the literature in the field it can be concluded that there is no consensus yet about (i) the pro/countercyclical character of fiscal policy in developing countries and (ii) what should be the appropriate role of fiscal policy over the business cycle in emergent countries, during a recession.

3. Evidence from Romania

The effects of the financial crisis reached Romania by the end of 2008. As shown in table 1 and figure 1, the GDP decreased strongly between 2008 and 2009, from 7.3% to -6.6%, with a moderate recovery in 2010 and 2011. Economic crisis has manifested in a sharp decrease in industrial production and a sharp increase of public budgetary deficit. Unemployment increased in Romania between 2008 and 2011 from 5.8 % to 7.4 %, with a small recovery in 2012 and the general government gross debt rose very fast from 13.4 % of GDP in 2008 to 37.8% in 2012, almost tripling in less than 4 years.

Table 1 Macroeconomic indicator during 2008-2012 in Romania

Years	Real GDP growth rate % yoy	Potential GDP growth rate % yoy	Production in Industry % change yoy	Deficit % of GDP	Unemployment rate %	General government gross debt % of GDP
2008	7,3	5.5	2.6	-5,7	5,8	13,4

2009	-6,6	0,9	-5,4	-9,0	6,9	23,6
2010	-1,1	0,8	4,8	-6,8	7,3	30,5
2011	2,2	1,4	7,6	-5,6	7,4	34,7
2012	0,7	1,8	2,8	-2,9	7,0	37,8

Source: Eurostat data

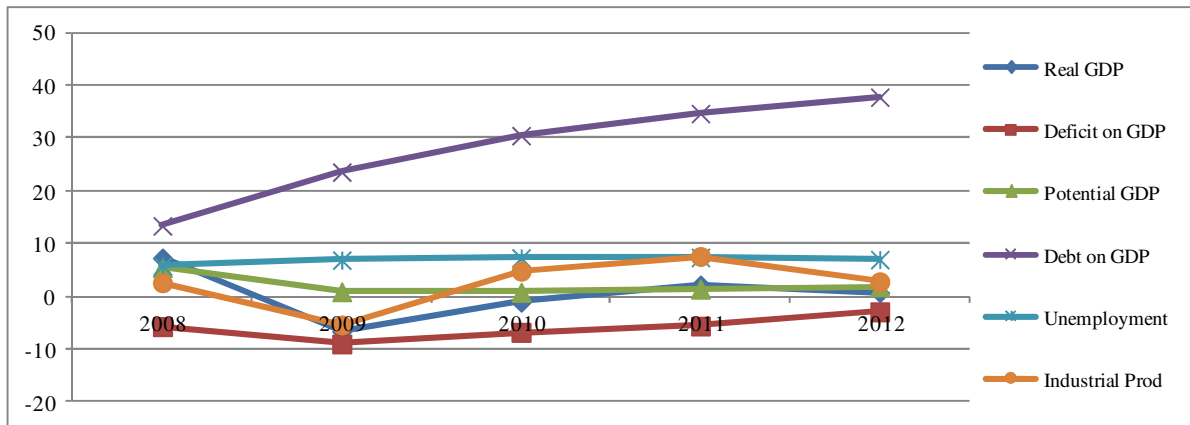


Figure 1. Macroeconomic dynamics in Romania during 2008-2012

Source: Author's own processing using Eurostat data

In order to reduce the GDP gap, in 2009 the government chose to enact sizeable fiscal restraints driven by spending cuts and increasing fiscal burden, particularly through cutting the public sector salaries by 15% for the last two month of the year and massive reduction of government spending, the introduction of the lump tax rate called the minimum tax, reduction of some fiscal deductibility, increasing of social security contribution by 3.3% in 2009, increasing ahead of time the excise duty on tobacco and spirits and growth of local taxes.

According to data provided by National Trade Register Office, the number of companies which suspended their activity rose almost 11 times in 2009, compared to the corresponding period of 2008, from 6.698 to 134.400. Another 66.400 companies have chosen to suspend the activity in 2010. This phenomenon is considered to be a positive consequence of the lump-sum tax, as shown in our previous research, Gündör and Nistor, 2009. The companies have chosen to suspend the activity instead of paying the lump-sum tax. As a consequence, the unemployment rate increased during the analysed period from 5.8 % in 2008 to 7.4% in 2011, as shown in table 1 and figure 1. Due to its negative effects, the government renounced at the minimum tax, starting with 1 October 2010.

Increasing the fiscal burden in crisis time definitely leads to unemployment which has many negative consequences for society, like GDP output gap, distribution effect and social costs. Unemployment means not only that the state does not collect tax and contributions to special funds, but also increases the costs of granting state unemployment fund. Business investment falls during times of high unemployment, which could cause the future level of output to decrease as well. As shown in literature, Wyant, 2013, high unemployment is associated with such social costs as high crime rates and alcoholism; Infrastructure and public services suffer due to lower tax revenues; Lower investments in education, combined with the negative effect of unemployment on the motivation of young people, can impact all of the costs associated with unemployment for future generations.

During 2010, the fiscal policy became even more restrictive through measures such as reduction by 25% of the public sectors salaries, cutting by 15% the unemployment benefits and increasing by 5% the VAT rate,

from 19% to 24%. Despite all these fiscal restrictive measures, the government expenditure continued to increase during 2009-2011 and as a logical consequence, the Government debt increases strongly as shown in table 2 and figure 2.

Table 2. Government’s Finance Indicator during 2008-2012 in Romania

Years	Total General Government Expenditure million EUR	Total General Government Expenditure % of GDP	Total General Government Revenue million EUR	Total General Government Revenue % of GDP	Total General Government Deficit (-) million EUR	Total General Government Deficit (-) % of GDP	Total General Government Gross Debt million EUR	Total General Government Gross Debt % of GDP
2008	54 907	39.3	46 966	33.6	7 941	5.7	17 158	13.4
2009	48 578	41.1	37 937	32.1	10 641	9	27 955	23.6
2010	49 863	40.1	41 414	33.3	8 449	6.8	37 462	30.5
2011	51 698	39.4	44 406	33.8	7 292	5.6	44 678	34.7
2012	47 905	36.4	44 132	33.5	3 773	2.9	49 997	37.8

Source: Eurostat data

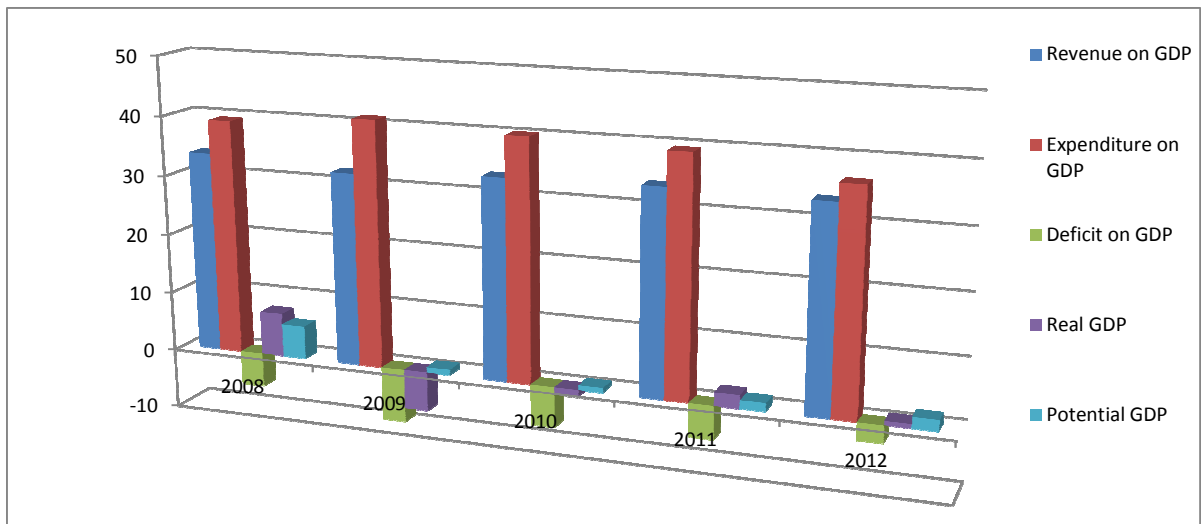


Figure 2. Government Finance Dynamics during 2008-2012 in Romania

Source: Author’s own processing using Eurostat data

According to our previous research Gündör, 2013, the general government deficit, which is the conventional deficit, can be decompose in two components:

$$CVD=SD+CYD \tag{1}$$

Where:

CVD means the conventional deficit

SD means the structural deficit

CYD means the cyclical deficit

The changes in the cyclical deficit *CYD* give information about the budgetary impact of aggregate fluctuations induced by changes in taxes and government expenditures as a result of business cycle.

By construction, When $Real\ GDP = Potential\ GDP$, $GDP\ gap = 0 \Rightarrow CYD = 0$ (2)

The situation (2) occurs when the *GAP* output is closed (real *GDP* is on trend) and its variations are considered to be outside the immediate control of fiscal authorities.

By subtracting the cyclical deficit from the conventional deficit, it results the structural deficit.

$SD = CVD - CYD$ (3)

The *SD* changes are generally interpreted as resulting from discretionary actions of policy makers, especially discretionary fiscal policy. As a result, *SD* provides a clear image of the fiscal situation of the economy, undistorted by the influence of the economic cycle. It represents the tool with which can be monitored and measured the components of the discretionary fiscal policy. In addition, it is an efficient way to assess the sustainability of public finance.

By analyzing the structural deficit in Figure 2, it results the pro-cyclical character of fiscal policy in Romania:

$Real\ GDP < Potential\ GDP$ and restrictive fiscal policy \Rightarrow the pro-cyclical character of fiscal policy in Romania

4. Evidence from Turkey: Global Crisis and Effects (2008-2012)

After 2001 crisis, Turkey proceeds on its way with its strong banking system which has a strengthened capital adequacy ratio, strong public finance, low net public external borrowing and by following tight fiscal discipline. Therefore, Turkey experiences a crisis not because of global banking crisis, but a crisis which has a national character, low growth rate and double-digit inflation. Turkish public finance is affected significantly by increasing oil prices, high real interest rate and rapidly increasing inflation (Batirel, 2008)

Turkey implements fiscal discipline and public debt sustainability successfully. Gross government debt/GDP ratio of Turkey has been lower than the Maastricht Criteria and also other emerging markets since 2008 as shown in Table 3.

One of the most important factors that helped Turkey economy to grow and stabilize during the period is the enormous financial expansion that was created in international markets (Susam and Bakkal, 2008).

To compensate for loss of production and employment fiscal incentive package has been applied by the government. Other laws legislated up to now for supporting fiscal policies and intervention of governments; privatization laws, improving sea commerce law, foreign investments incentive law, for unfinished investments and for their loss and deficit laws etc. In 2004 new incentive law was invoked and in 2007 this law was changed and widen. With this new existing law, 6 prior zones are identified (ISPA, 2013).

Table 3. Maastricht Criteria of Turkey, 2001-2012

Years	GDP growth rate (%)	Debt/GDP (%)	Deficit/ GDP (%)	Inflation (%)	Int. Rate (%)
2001	-5,7	112,1	-12,1	68,4	87,4
2002	6,2	85,8	-10	44,9	62,4
2003	5,3	67,7	-7,3	25,3	38,9

2004	9,4	59,6	-3,6	10,6	24,26
2005	8,4	52,7	0,1	8,2	20,4
2006	6,9	46,5	1,9	9,6	21,65
2007	4,7	39,9	-0,1	8,3	22,7
2008	0,7	40	-1,6	10,1	16
2009	-4,8	46,1	-5,1	6,53	6,5
2010	9,2	42,4	-2,3	6,4	6,5
2011	8,8	39,4	-0,1	10,45	6,2
2012	2,2	36,1	-1,7	6,16	5,7

Sources: All data compiled from OECD, Turkish Statistical Institute, IMF, and Eurostat.

This law supports income tax withholdings, insurance premium, and energy; value added tax, exemption from customs duty until the end of 2009 and income tax for employee working in research and development (r&d) until the end of 2013. In order to further accelerate investment decision, the new investment incentives system grants are initiated by the end of 2013. Effective as of January 1st, 2012, the new law is comprised of four different schemes. Local and foreign investors have general investment (VAT and customs duty exemptions), regional investment, large-scale investment and strategic investment incentives (tax reduction, social security premium support for employer’s share, income tax withholding allowance, social security premium support for employee’s share, interest rate support, land allocation, VAT refund and all) schemes (ISPA, 2013).

In October 2010, the Turkish government announced its new Medium-Term Programme (MTP) covering 2011 to 2013. According to this programme, general government deficit as a share of GDP, which reached its peak at 5.5% in 2009, is targeted to decrease to 1.1% of GDP by the end of 2013 (OECD, 2011). The stimulus package is based on additional expenditures and mostly temporary tax rate cuts, in order to stimulate the business. According to OECD studies (2011), the total fiscal burden of the package is gradually decreasing. The possible effects of the budget deficits resulting from the fiscal policy to attempt to improve the economy determine the stabilization role of fiscal policy (Karakurt, 2010).

Table 3 shows that 2008 crisis affected GDP growth rate. Until 2008 crisis, Turkey applied to achieve primary surplus target. In 2008, this target reduced to 3.5 percent and living without deflation, Turkey put into process the new incentive laws that helped real sector to be kept alive. Even though current account balance is about -8,8 percent in 2012, Turkey is undertaking incentive policies with the new incentive law.

The Fiscal Rule Law (FRL) which was submitted to the parliament in the first half of 2010 refers to a cyclically adjusted deficit rule for the overall balance of the general government sector, aimed to converge to 1% of GDP in the long term. The FRL introduced a **numerical fiscal rule** in order to enact the fiscal stabilizers, to reduce the discretionary character of fiscal policy and to conduct a countercyclical fiscal policy, to struggle with economic instabilities, budget deficits and public financial imbalances.

The numerical design of the Turkish fiscal rule:

$$a_{(t)} \leq a_{(t-1)} - y(a_{(t-1)} - a^*) - k(b_{(t)} - b^*) \tag{4}$$

Where:

$$-y(a_{(t-1)} - a^*)$$

is the adjustment for the deviation of the previous year’s deficit from the long-term deficit ceiling.

$$-k(b_{(t)} - b^*)$$

	is the adjustment for the deviation of GDP growth from the benchmark GDP growth rate
y	is the convergence pace coefficient.
$a_{(t)}$	is the general government deficit ceiling as a share of GDP for the current year.
$a_{(t-1)}$	is the previous year's general government deficit as a share of GDP.
a^*	is the general government deficit ceiling target for the long term.
k	is the cyclical adjustment coefficient.
$b_{(t)}$	is the real GDP growth rate estimation for the current year.
b^*	is the real GDP growth rate benchmark.

The focus is restricted to rules that impose a specific, binding **quantitative constraint on the government's range of policy options**, forcing the government to target a budget deficit [a^*] of 1 percent of GDP, an annual growth [b^*] of 5 percent and to reduce the ratio of debt to GDP, to 15 percent in the long term. The speed of convergence y is established at 0,33 which means that 33% of the deviation of the previous fiscal year's general government deficit [$a_{(t-1)}$] from the long-term target of 1% is going to be compensated in the current fiscal year. [$-k(b_{(t)} - b^*)$] aims to reduce undesirable effects of cyclical fluctuations on the economy, ensuring the counter-cyclical character of fiscal policy. The cyclical adjustment coefficient [k] is established at 0.33.

As a rule of thumb, it can be assumed that one percentage point deviation of real GDP growth creates a 0.33 percentage point increase or decrease in the general government deficit. (Kaya and Yilar, 2011) Thus, this coefficient represents elasticity of general government expenditures and revenues in relation to the real GDP growth.

The basic principles for the fiscal policy rule are the fiscal discipline and automatic fiscal stabilizer.

For all these policies, Turkey needs more money which must be supplied from new investments, especially foreign direct investments. This issue will be examined in another study.

With the new incentive (pump-priming) law, government expenditures are rising. Future economic plans of Turkey are lower interest rate and lower inflation with independent central bank and independent monetary policies. Nowadays Turkish data indicates that all variables are in Maastricht Criteria range.

5. The study results

The present study shows that there are strong evidences regarding the pro-cyclical character of fiscal policy in Romania in crisis time. We find evidence that is consistent with the existence of pro-cyclical ratcheting in taxation and government spending in Romania, resulting in reducing government expenditure and raising taxes in downturns.

A question arises from such an evolution: "Why Romania could not promote a countercyclical fiscal policy?" The answer is that (i) Romania has made large fiscal adjustments during the expansion periods, opposite to the findings of the researchers, which recommend fiscal consolidation processes in good times and not during bad times when they might play some role in smoothing output declines; (ii) Based on our previous research regarding automatic stabilizers and discretionary fiscal policy we can conclude that fiscal pro-cyclicality in Romania arises from both the weakness of automatic stabilizers and the pro-cyclical bias of discretionary policies. In crisis time, Romania's discretionary fiscal strategy is based not on incentives to business, but on the increasing of the fiscal burden for better financing the budget in order to keep the deficit at lower limits; (iii) Pro-cyclicality of the fiscal policy seems also to be more evident in more corrupt democracies as stated by Dumitru and Stanca, 2010; (iv) Weak legal and political infrastructure generates pro-cyclicality. According to Dima et al., 2009, public authorities have a single goal, to ensure a balance in the short time, to reach the Maastricht convergence criteria and rigid observance of the old Stability and Growth Pact, so, in

Romania, “such prerequisites for sustainable development and sustainable by promoting consistent policies tax revenue and expenditure, were ignored.”

As it regards the case of Turkey, it had overcome the global crises thanks to structural reforms as banking reforms and fiscal policies. These fiscal policies provided with fiscal discipline can be summarized: expenditures (especially infrastructure, buildings, and double road[†] which are better way for income distribution) outsourced from privatization, tight financial audits, structural savings (import medicine with lower prices, incentives to local investor for domestic investment) etc. With all incentive and expenditure policies, main aim is real sector development. In order to overcome the crisis, Turkey conducts expansionary and countercyclical fiscal policies (demand stimulating policies contrary to demand diminishing policies). Moreover, the countercyclical character of fiscal policy was explicitly designed by the Fiscal Rule Law which creates space for automatic fiscal stabilizer and reduces the share of discretionary fiscal policy, with the aim of supporting counter-cyclical fiscal policy.

5. Conclusion

The present study shows that there are strong evidences regarding the pro-cyclical character of fiscal policy in Romania, which support the (h₁) working hypotheses. On the other hand, the study reveals the countercyclical character of fiscal policy in Turkey, which does not support (h₁). In this situation we can contradict the scientific literature which claims that “The emerging countries/developing economies pursuit a pro-cyclical fiscal policy”.

As it regards the (h₂) working hypotheses, the study indicates that in Romania, during the contemporary crisis time, the pro-cyclical fiscal policy failed to play its stabilization role. In a sharp contrast, the introduction of automatic stabilizers as a non-discretionary fiscal policy during the contemporary crisis time in Turkey generated a quick recovery of the economy. In this perspective we can claim that the pro-cyclical fiscal policy harms the economy/countercyclical fiscal policy play a stabilization role.

The solution: In order to ensure the sustainability of public finance, the governments must reduce the weight of discretionary fiscal policy through the introduction of automatic stabilizers into the economy.

Future research will study the effects of specific categories of fiscal instruments on GDP as well as the channels and mechanisms through which these effects take place.

References

- Akitoby, B., Clements, B., Gupta, S., Inchauste, G., 2006. Public spending, voracity and Wagner’s law in developing countries, *European Journal of Political Economy*, No. 22, p. 908– 924.
- Alesina, A., Ardagna, S., 2010. Large Changes in Fiscal Policy: Taxes versus Spending, in Jeffrey R. Brown, editor, “Tax Policy and the Economy”, Volume 24, The University of Chicago Press, p. 36-68. <http://ideas.repec.org/h/nbr/nberch/11970.html>
- Alesina, A., Filipe, C., Guido, T., 2008. Why is fiscal policy often pro-cyclical?, *Journal of the European Economic Association*, Vol. 6, No. 5, p. 1006-1036.
- Baldacci, E., Gupta, S., Mulas-Granados, C., 2012. How Effective is Fiscal Policy Response in Financial Crises?, *IMF Seminars*, p.3.
- Bank for International Settlements, 2003. Fiscal issues and central banking in emerging economies, *BIS Papers*, No. 20, p. 1-9.
- Batrel, Ö.F., 2008. Global Ekonomik Kriz ve Türk Kamu Maliyesi, *İstanbul Ticaret Üniversitesi Sosyal Bilimler Dergisi*, Yıl: 7, Sayı:13, s.1-9.
- Blinder, A.S., Solow, R.M., 1973. Does Fiscal Policy Matter?, *Journal of Public Economics*, 2(4), 319-337.
- Boratav, K., Yeldan, E., 2006. Turkey, 1980-2000: Financial Liberalization, Macroeconomic (In-)Stability, and Patterns of Distribution in “External Liberalization in Asia, Post-Socialist Europe, and Brazil”, *Oxford University Press*, p. 420-421.

[†] In 2001, Housing Development Fund (from 1984) was removed along with some other funds and with The Mass Housing Law, The Housing Development Administration (TOKİ) re-regulated and government contracted or made these investments by build-operate-and transfer model.

- Christiano, L., Eichenbaum, M., Rebelo, S., 2011. When Is the Government Spending Multiplier Large?, *Journal of Political Economy*, Vol. 119, No. 1, p. 78–121.
- Didier, T., Hevia, C., Schmukler, S. L., 2012. How resilient and countercyclical were emerging economies during the global financial crisis?, *Journal of International Money and Finance*, Science Direct Thomas Reuters, Volume 31, Issue 8, p. 2052–2077.
- Dima, B., Loboņ, O., Nicolescu, C., 2009. The Fiscal Revenues and Public Expenditures: Is Their Evolution Sustainable? The Romanian Case, *Annales Universitatis Apulensis Series Oeconomica*, 11(1)
- Dumitru, I., Stanca, R., 2010. Fiscal discipline and economic growth - the case of Romania, MPRA Paper No. 27300, p. 1-16.
- Eurostat, <http://epp.eurostat.ec.europa.eu/>
- Frankel, J.A., Vegh, C.A., Vuletin, G., 2011. On graduation from fiscal procyclicality, *Journal of Development Economics*, Elsevier, vol. 100(1), p. 32-47.
- Freedmana, C., Kumhofb, M., Laxtonb, D., Muirb, D., Mursulab, S., 2010. Global Effects of Fiscal Stimulus during the Crisis, *Journal of Monetary Economics*, 57, p. 506-526.
- Gelb, A., Meyer, C., Ramachandran, V., 2013. Does Poor Mean Cheap? A Comparative Look at Africa's Industrial Labor Costs, Working Paper 325, Center for Global Development, May, p. 26.
- Gündör, M., 2013. Discretionary and Nondiscretionary in Fiscal Policy of European Union States, in "Fiscal-Budgetary Studies and Research, Vol. 3, Editor Romanian Academy, p. 415-461
- Gündör, M., Nistor, P., 2009. A financial crises demands fiscal solutions, International Conference "Financial Trends in the Global Economy", Babeş Bolyai University of Cluj Napoca, Faculty of Economic Science and Business Administration, Finance Department, Editura Casa Cartii de Stiinta, p. 148-159.
- Gosh, A. R., Chamon, M., Crowe, C., Kim, J. I., Ostry, J. D. 2009. Coping with the Crisis: Policy Options for Emerging Market Countries, IMF Staff Position Note, SPN/09/08.
- Hanke, S. H., 2007. Reflections on Turkey's Economy, CATO Institute, <http://www.cato.org/publications/commentary/reflections-turkeys-economy?print>, 11.04.2013.
- International Monetary Fund, 2009. The State of Public Finances: Outlook and Medium-Term Policies After the 2008 Crisis, Washington, DC, p. 4-51.
- ISPA (Investment Support and Promotion Agency), Turkey's Investment Incentives System, <http://www.invest.gov.tr/en-US/investmentguide/investorguide/Pages/Incentives.aspx>, 06.05.2013.
- Kaya, F., Yılar, S., 2011. Fiscal Transformation in Turkey over the Last Two Decades, *OECD Journal on Budgeting*, Volume 2011/1, OECD, p.59-74
- Karakurt, B., 2010. Küresel Mali Krizi Önlemede Maliye Politikasının Rolü ve Türkiye'nin Krize Maliye Politikası Cevabı, Atatürk Üniversitesi İktisadi İdari Bilimler Fakültesi Dergisi, Cilt:24, Sayı: 2, s. 167-195.
- Kaya, F., Yılar, S., 2011. Fiscal Transformation in Turkey Over The Last Two Decades, *OECD Journal on Budgeting*, Vol. 2011/1, p.62.
- Kydland, F.E., Prescott, E. C., 1977. Rules Rather Than Discretion: The Inconsistency of Optimal Plans, *The Journal of Political Economy*, 85 (3), 473-2.
- Lane, T., 2007. Public Finance Systems in Transition Countries in Gray, L., Lane, T., in Varoudakis, A., editor, "Fiscal Policy and Economic Growth: Lessons for Eastern Europe and Central Asia", World Bank, Washington, p. 26.
- Modigliani, F., 1961. Long-Run Implications of Alternative Fiscal Policies and the Burden of the National Debt, *Economic Journal* 71(4), 730-755.
- Patinkin, D., 1964. Money, Interest, and Prices, 2nd Edition, Harper&Row, New York.
- Serven, L., 1998. Macroeconomic Uncertainty and Private Investment, in LDCs: an Empirical Investigation, Working Paper No. 2035.
- Spilimbergo, A., Symansky, S., Blanchard, O., Cottarelli, C., 2008. Fiscal Policy for the Crisis, IMF Staff Position Note, SPN/08/01, p.2.
- Susam, N. and Bakkal, U., 2008. Kriz Süreci Makro Değişkenleri ve 2009 Bütçe Büyüklüklerini Nasıl Etkileyecek?, *Maliye Dergisi*, Sayı:155, s.72-88.
- TSI (Turkish Statistical Institute), <http://www.turkstat.gov.tr/UstMenu.do?metod=temelist>, 23.05.2013.
- Vegh, C.A., Vuletin, G., 2012. How is tax policy conducted over the business cycle?, NBER Working Paper No. 17753, p. 2-38.
- Wyant, J., 2013. Basic Economics for Students and Non-Students Alike, Published by Jerry Wyant at "Smashwords", p.70-71