

Public Governance efficiency and macroeconomic stability: examining convergence of social and political determinants

Yuriy Bilan

*University of Social Sciences,
9 Sienkiewicza St., 90-113 Łódź, Poland*

Agota Giedrė Raišienė

*Lithuanian Institute of Agrarian Economics,
V. Kudirkos str. 18–2, LT-03105 Vilnius, Lithuania*

Tetyana Vasilyeva, Oleksii Lyulyov, Tetyana Pimonenko

*Sumy State University,
Rymського-Korsakova str., 40007 Sumy, Ukraine*

DOI:10.13165/VPA-19-18-2-05

Abstract. *The purpose of this article is to propose the integrated index of Public Governance efficiency based on the Fishburne's method, considering the impact's power and direction of the different sub-indexes (Worldwide Government Indicators) on macroeconomic stability and eliminating the issue of multicollinearity. The object of the study was 11 European countries that had two common features: 1) in the political sphere, during 1990–1992 the countries started the political transformation process by refusing the monopoly of the communistic regime; 2) in the economic sphere, the countries experienced transformation from planned to market economy. Based on these criteria, the following countries were selected: Lithuania, Latvia, Poland, Bulgaria, Croatia, Romania, Armenia, Belorussia, Georgia, Moldova, and Ukraine. The research findings proved a connection between the political and social determinants and the macroeconomic stability for the all the countries. Moreover, the research results confirmed the existence of a cycle of social and political conflict, which depends on inter-relation of Public Governance and the*

society, where the efficiency of Public Governance cannot be achieved without the support from the society, and the society cannot cooperate with non-effective Public Governance.

Keywords: *Public Governance efficiency; macroeconomic stability; GMM model, Fishburne's method.*

Raktažodžiai: *viešojo valdymo efektyvumas; makroekonominis stabilumas; GMM modelis; Fishburne metodas.*

Introduction

The ongoing trend of world development justifies the emergence of new challenges for countries in order to strengthen their competitiveness. The main indicator that influences the economic competitiveness of a country is the level of macroeconomic stability.

It should be emphasised that after the global financial crisis in 2008–2009, most countries lost their position in the world economy. In Europe, Switzerland became the absolute leader according to the Global Competitiveness Index, whereas Moldova, Romania, Croatia, Bulgaria, Poland, Lithuania, Latvia and a lot of other nations lost their position (Global, 2018). Aiming to provide an effective mechanism to achieve macroeconomic stability of the economy, in 2011, EU authorities updated and implemented a new procedure for estimating the level of macroeconomic stability called Macroeconomic Imbalance Procedure (MIP). The main feature of this procedure is that it takes into account the relationship between the actions and the consequences in one country that could affect other countries. Accordingly, the main goal of the MIP is to identify, prevent and address the emergence of potentially harmful macroeconomic imbalances that could adversely affect the economic stability in a particular EU country, the euro area, or the EU as a whole (Dealing, 2017). Nevertheless, the negative consequences of previous crises have not been totally overcome by some countries yet. A huge negative impact is felt in the post-Soviet countries in particular. These countries still have big gaps between economics, political and social institutions. In their case, the key issue is understanding the main factors and determinates that influence the growth and macroeconomic stability of the country.

According to the conditional convergence concept based on the economic growth model of Solow (1956), whether absolute convergence between countries or regions occurs depends on whether they have similar characteristics (Barro, Sala-I-Martin, 2004). Besides the traditional labour, capital, technical progress, and natural resources, the concept of conditional convergence includes Public Governance efficiency with such elements as education, prudent economic policies, institutional arrangements, long-term perspective of strategic planning, etc. (Rodrik, 2014; Jovovic et al., 2017).

Considering the relevance of Public Governance impact to the country's macroeconomic stability, the authors aimed to compile an integrated index of Public Governance efficiency. The index was based on the Fishburne's method, and a dy-

dynamic panel lags model was based on the GMM model, which eliminates the heterogeneity problems of changing the indicators in different countries and the errors of their assessment. The object of the study was 11 European countries that had two common characteristics: 1) the element of similar situation in state policy: during 1990–1992, all of them started the political transformation process by refusing the monopoly of the communistic regime; 2) the element of similar situation in economics: all of them had experienced transformation from planned to market economy. Based on these criteria, the following countries were selected: Lithuania, Latvia, Poland, Bulgaria, Croatia, Romania, Armenia, Belorussia, Georgia, Moldova, and Ukraine.

Public Governance and country's macroeconomic stability: features of inter-relation

EU Regulation No 1176/2011 on the prevention and correction of macroeconomic imbalances is taken as background in discussion on the issue of estimating the country's macroeconomic stability. The regulation defines macroeconomic imbalance as 'any trend giving rise to macroeconomic developments, which are adversely affecting, or have the potential to adversely affect, the proper functioning of the economy of a Member State or the Economic and Monetary Union, or the Union as a whole', while excessive imbalances are seen as severe imbalances that jeopardise or risk jeopardising the proper functioning of the Economic and Monetary Union (EMU) (Regulation, 2018). In the academic literature, various authors (e.g. Manso et al., 2015; Pilia, 2017; Želazny, 2017; Lyeonov et al., 2018) analyse the macroeconomic stability in low-middle development countries through basic indicators, such as the level of GDP growth, unemployment rate, inflation rate, budget balance of the state to GDP, and balance of the current turnovers size to GDP.

Vasylieva et al. (2018) proved the relationship between macroeconomic stability and the country's economic growth through a modified Cobb–Douglas production function, where macroeconomic stability, openness of the economy and direct foreign investments were used as additional explanatory variables of the Cobb–Douglas production function. Vasylieva and Kasianenko (2013) proved that innovation potential is a key factor that indicates the country's development and consequently influences the macroeconomic stability. Krasnyak et al. (2015), Lyulyov (2015), Blanco-Encomienda and Ruiz-García (2017) defined macroeconomic stability as the sustainable development of all economic sectors (corporate sector, transport system, renewable resources, etc.). Chygryn et al. (2018) analysed the results of fiscal decentralisation as the main factor that influences social and economic development. However, in scientific literature, institutional environment of Public Governance is also underlined as a key determinant of macroeconomic stability, along with the traditional ones, such as labour, capital, technical progress and natural resources (Alguacil et al., 2011; Rodrik, 2014; Arif, Ahmad, 2017; Salter, Tarko, 2017; Yimer, 2017). The role of Public Governance is twofold in the context of macroeconomic stability: it can block the opportunistic

behaviour when dividing resources, but in cases of disproportion in authority, lack of accountability and transparency, as well as a high level of corruption etc., it can intensify the diffusion of negative macroeconomic effects from external shocks and decrease the pace of post-crisis recovery of macroeconomic stability. This was proved by Mehanna et al., (2010) who analysed the impact of Public Governance efficiency on economic growth of MENA countries (1996–2005) and highlighted the statistically significant and positive impact of some of the Worldwide Government Indicators, such as voice and accountability, government effectiveness and control of corruption, on economic growth. Moreover, Bayar (2016) found that Worldwide Government Indicators have a statistically significant and positive impact on economic growth. The author observed that decreasing the level of corruption has the most significant impact on economic growth. At the same time, achieving political stability in the country, as a key indicator of Public Governance efficiency and vice versa, has the lowest impact.

In order to deal with differences in the rating of key impact factors and to reliably estimate the impact of Public Governance efficiency on economic growth, the researchers strived to develop methodologically well-grounded models. Zaman and Drcelic (2009) macroeconomic stability index based on the pentagon macroeconomic stability concept, suggested by Kolodko (1993), can be mentioned as one. The pentagon is based on five indicators of stability: real GDP growth, unemployment, inflation, budget deficit and foreign debt.

Emara and Chiu (2015) proposed a regression model based on Kaufmann et al. (2002), with per capita income (pgdp) as a variable indicator and governance index (govi) as an independent one:

$$\text{pgdp}_i = \alpha + \beta * \text{gov}_i + e_i. \quad (1)$$

The governance index here was calculated by using the main principles of Principal Component Analysis (PCA) for the Worldwide Government Indicators. The calculations allowed to make a conclusion that an increase of governance index by 1% would result in an increase of GDP by 2%.

Han et al. (2014) analysed the panel data by using the GMM model (Hansen et al., 1996; Bakari et al., 2018) with the main variables being GDP per capita and GDP growth, and independent variables being governance principal components, economic openness, direct foreign investment etc. They concluded that 'good governance, while important in and of itself, can also help in improving a country's economic prospects'.

Marino et al. (2016), Chychkalo-Kondratsk et al. (2017) included additional indicators in order to understand the dynamics of change related to the level of Global Governance Indicators. The authors agreed with Gaygisiz (2013) that the level of Public Governance efficiency influences not only economic processes, but also the social development of the entire country (healthcare system, education etc.). According to the researchers, Human Development Index (HDI) (United Nations, 1990) is very important

for evaluating social development. Some studies proved that only two out of six indicators of Public Governance efficiency (government effectiveness and control of corruption) in the BRICS countries resulted in a decrease of HDI (Marino et al., 2016).

Another instrument, i.e. Worldwide Government Indicators, was developed as efficiency criteria of political institutions by Kaufmann, Kraay and Zoido-Lobaton (1999) and Kaufmann, Kraay and Mastruzzi (2004). In their research, the authors presented substantially expanded and updated indicators of the six dimensions of governance. Nevertheless, they declared that this type of data cannot substitute for in-depth, country-specific governance diagnostics as a basis for policy advice to improve governance in a particular country (Kaufmann, 2004, p.40).

As can be seen, there is a variety of methodologies, models and indexes for estimating and measuring the interdependence of macroeconomic stability and Public Governance efficiency. Thus, further analysis of different cases with the aim to collect adequate knowledge on the issue is still needed in science as well as in practice.

Research methodology

With the purpose of formalising the impact of Public Governance efficiency on macroeconomic stability, we propose the following dynamic lag model:

$$MS_{it} = \alpha_0 + \alpha_1 MS_{it-1} + \alpha_2 WGI_{it} + \alpha_3 X_{it} + \varepsilon_{it}, \quad (2)$$

where MS_{it} – level of macroeconomic stability; WGI_{it} – integrated index of the *Public Governance efficiency*; X_{it} – matrix of variables of country's social development; $\alpha_0 \dots \alpha_3$, – constants; ε_{it} – deviation of equation.

The main features of the developed research model (2) are the following: 1) based on the GMM, it is possible to eliminate the heterogeneity problems of changing the indicators in different countries and the errors of their assessment; 2) lag variables MS_{it-1} take into account the chain reaction 'Public Governance efficiency in the previous year → level of macroeconomic stability in the previous year → level of macroeconomic stability in the current year'; 3) the matrix of variables was formed taking into account the convergence impact of the social determinants and Public Governance efficiency on the level of macroeconomic stability (variables that had significant impact in calculating social progress index proposed by Lyulyov et al. (2018)), using the principal components method: human development index (HDI), global innovation index (GII) and freedom index of mass media (PFI).

Also, we used macroeconomic stability index (Zaman and Drcelic, 2009) and Worldwide Government Indicators as efficiency criteria of political institutions (Kaufmann et al., 1999; Kaufmann et al., 2004). These were namely: voice & accountability (WGIViA), political stability (WGIPS) and lack of violence, government effectiveness (WGIGE), regulatory quality (WGIRQ), rule of law (WGIRL), and control of corruption (WGICC). The abovementioned indexes are based on the statistical

data, choosing only expert interview as a method for collecting datasets and making calculations for a high number of countries.

To estimate the Public Governance efficiency WGI was used here

$$WGI = \sum_{i=1}^n w_i \times WGI_i = \sum_{i=1}^n \frac{2(n-j+1)}{n(n+1)} \times WGI_i \quad (3)$$

where w_i – weight of i sub-index, n – quantity of sub-indexes, j – rank of sub-index, WGI_i – calculated i sub-index values.

The main features of calculations made are as follows: 1) they were based on the Fishburne's method (Fishburne, 1978) and took into account impact's power and direction of the different sub-indexes (Worldwide Government Indicators) on macroeconomic stability, eliminating the issue of their multicollinearity; 2) the weight coefficients for each index were calculated empirically using the non-linear econometric model that estimates the impact's power and direction of each sub-indexes on macroeconomic stability.

The object of the study was European countries that had started a political transformation process by refusing the monopoly of the communistic regime, and ii) had experienced transformation from planned to market economy. Based on these criteria, 11 countries were selected: Lithuania, Latvia, Poland, Bulgaria, Croatia, Romania, Armenia, Belarus, Georgia, Moldova, and Ukraine.

Research results

The results of the analysis showed that the impact of Public Governance efficiency on macroeconomic stability was different for each country group (Table 1).

Table 1. Impact of Public Governance efficiency sub-indexes on macroeconomic stability (non-linear econometric model).

Indicators	Country	Correlation coefficient	Regression equation	R ²	Statistical significance		Power of relation	Model adequacy	Impact's power and direction
					const	WGI _i			
WGI _{VIA}	(1)	0.626	$Ln MS = -0.1 + 0.989 WGI_{VIA}$	0.3920	0.038	0.009	exist	adequacy	Strong, positive
	(2)	-0.652	$Ln MS = 0.25 - 0.1147 WGI_{VIA}$	0.2435	0.000	0.000	exist	adequacy	Strong, negative
	(3)	0.386	$Ln MS = 0.29 - 0.1877 WGI_{VIA}$	0.1491	0.000	0.029	weak	adequacy	Strong, negative
	(4)	-0.559	$Ln MS = 0.38 - 0.323 WGI_{VIA}$	0.3781	0.000	0.011	exist	adequacy	Strong, negative

WGI _{PS}	(1)	0.073	$Ln MS = 0.32 + 0.0476 WGI_{PS}$	0.0054	0.006	0.787	weak	Non-adequacy	
	(2)	0.151	$Ln MS = 0.35 + 0.1283 WGI_{PS}$	0.1495	0.000	0.002	weak	adequacy	Strong, positive
	(3)	0.456	$Ln MS = 0.39 + 0.1445 WGI_{PS}$	0.2083	0.000	0.009	exist	adequacy	Strong, positive
	(4)	0.497	$Ln MS = 0.49 + 0.0803 WGI_{PS}$	0.1839	0.000	0.097	exist	adequacy	Strong, positive
WGI _{GE}	(1)	0.824	$Ln MS = 0.13 + 0.4676 WGI_{GE}$	0.6795	0.009	0.000	high	adequacy	Strong, positive
	(2)	-0.557	$Ln MS = 0.24 - 0.2089 WGI_{GE}$	0.5107	0.000	0.000	exist	adequacy	Strong, negative
	(3)	0.673	$Ln MS = 0.27 + 0.1481 WGI_{GE}$	0.4528	0.000	0.000	exist	adequacy	Strong, positive
	(4)	0.09	$Ln MS = 0.57 + 0.1932 WGI_{GE}$	0.0264	0.014	0.548	weak	Non-adequacy	
WGI _{RO}	(1)	0.539	$Ln MS = 0.08 + 0.3515 WGI_{RO}$	0.2908	0.494	0.031	exist	adequacy	Strong, positive
	(2)	-0.477	$Ln MS = 0.28 - 0.1473 WGI_{RO}$	0.5339	0.000	0.000	exist	adequacy	Strong, negative
	(3)	0.58	$Ln MS = 0.32 + 0.1272 WGI_{RO}$	0.3367	0.000	0.000	exist	adequacy	Strong, negative
	(4)	0.364	$Ln MS = 0.78 - 0.6147 WGI_{RO}$	0.0952	0.013	0.245	exist	Non-adequacy	
WGI _{RL}	(1)	0.757	$Ln MS = 0.17 + 0.3994 WGI_{RL}$	0.5724	0.001	0.001	high	adequacy	Strong, positive
	(2)	-0.505	$Ln MS = 0.21 - 0.2139 WGI_{RL}$	0.3535	0.000	0.000	exist	adequacy	Strong, negative
	(3)	-0.349	$Ln MS = 0.27 - 0.1225 WGI_{RL}$	0.1218	0.000	0.050	exist	adequacy	Medium, negative
	(4)	0.021	$Ln MS = 0.37 - 0.1025 WGI_{RL}$	0.0045	0.281	0.806	weak	Non-adequacy	
WGI _{CC}	(1)	0.93	$Ln MS = 0.21 + 0.6947 WGI_{GE}$	0.8640	0.000	0.000	high	adequacy	Strong, positive
	(2)	-0.336	$Ln MS = 0.27 - 0.1095 WGI_{GE}$	0.1025	0.000	0.010	exist	adequacy	Strong, negative
	(3)	-0.647	$Ln MS = 0.27 - 0.1302 WGI_{GE}$	0.4184	0.000	0.010	exist	adequacy	Strong, negative
	(4)	0.388	$Ln MS = 0.78 - 0.3451 WGI_{GE}$	0.1109	0.008	0.207	exist	adequacy	Weak, negative
(1) – countries – new members of EU (2) – Armenia, Belorussia; (3) – Georgia, Moldova; (4) – Ukraine									

Sources: compiled by authors.

Thus, in the EU countries (Lithuania, Latvia, Poland, Bulgaria, Croatia, Romania) the impact of each sub-index of Public Governance efficiency on macroeconomic stability was statistically significant (1 to 5%) and positive. The most influential factors-stimulators of macroeconomic stability were: WGIViA (increasing MS by 98%), WGICC (by 69%) and WGIGE (by 46%).

For the post-Soviet countries characterised by authoritarian manifestations in Government (Economist Intelligence Unit, 2018) or in the beginning the transformation process (Belarus, Armenia), only the sub-index of WGIPS had the most significant impact. It shows that democracy is not a consequence of political stability. Nevertheless, if countries from this group do not implement reforms on increasing Public Governance efficiency, the macroeconomic stability will decrease (the decrease of WGIRL, WGIGE, WGIRQ leads to a decrease of MS by 21.39%, 20.89% and 14.73% respectively).

For countries in the last stage of transformation to democracy (Economist Intelligence Unit, 2018), i.e. Georgia and Moldova, indicators WGIPS, WGIRQ, WGIGE had a positive impact on macroeconomic stability. At the same time, indicators WGIViA, WGICC, WGIRL had a negative impact. If these countries do not finish their transformation process in the nearest future, they could return to an authoritarian government and the level of macroeconomic stability will decrease (on average by 15% for every percentage point of indicators).

In Ukraine, Public Governance efficiency did not influence macroeconomic stability, and this fact actualises the problem of society's trust (decrease of WGIViA led to a decrease of macroeconomic stability by 32%, correlation coefficient 0.559).

In addition, the research shows the defective cycle of social and political conflict: on one hand, the efficiency of Public Governance could not exist without the support from the society; on the other, the society could not cooperate with ineffective Public Governance. The permanent disregard of this conflict is the biggest issue for a country's macroeconomic stability. The findings allowed to develop a model of functional relationships integrated indicator WGI from its sub-indexes for every group of countries:

$$(1): WGI = 0.2857WGI_{ViA} + 0.0474WGI_{PS} + 0.1905WGI_{GE} + 0.0954WGI_{RQ} + 0.1429WGI_{RL} + 0.2381WGI_{CC}$$

$$(2): WGI = 0.1905WGI_{ViA} + 0.2857WGI_{PS} + 0.0954WGI_{GE} + 0.1429WGI_{RQ} + 0.0474WGI_{RL} + 0.2381WGI_{CC}$$

$$(3): WGI = 0.0474WGI_{ViA} + 0.2381WGI_{PS} + 0.2857WGI_{GE} + 0.1905WGI_{RQ} + 0.1429WGI_{RL} + 0.0954WGI_{CC}$$

$$(4): WGI = 0.2857WGI_{ViA} + 0.2381WGI_{PS} + 0.1905WGI_{GE} + 0.0474WGI_{RQ} + 0.1429WGI_{RL} + 0.0954WGI_{CC}$$

(4)

where (1) – new members of EU (2) – Armenia, Belorussia; (3) – Georgia, Moldova; (4) – Ukraine.

The calculation results of integrated indicator WGI using (4) for the group of countries are presented in the Table 2.

Table 2. The integrated indicator WGI for the group of countries, 2000–2017 year.

Group of the countries	2000	2004	2008	2012	2013	2014	2015	2016	2017
Lithuania, Latvia, Poland, Bulgaria, Croatia, Romania	0.325	0.4586	0.4943	0.5688	0.603	0.6556	0.6629	0.6501	0.6507
Armenia, Belorussia	-0.605	-0.582	-0.426	-0.275	-0.253	-0.205	-0.241	-0.234	-0.228
Georgia, Moldova	-0.569	-0.572	-0.279	-0.048	-0.0012	0.0436	-0.058	-0.018	0.022
Ukraine	-0.721	-0.621	-0.413	-0.552	-0.621	-0.573	-0.569	-0.486	-0.402

Source: authors' calculation.

The results of calculation using the model developed (2) are presented in the Table 3.

Table 3. Impact of the Public Governance efficiency on macroeconomic stability

Variables	Lithuania, Latvia, Poland, Bulgaria, Croatia, Romania		Armenia, Belorussia		Georgia, Moldova		Ukraine	
	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
Values of constant α corresponds to the variables in the dynamic model (1)								
MS _{it-1}	0.8100878 (0.002)	1.199598 (0.002)	0.4885503 (0.000)	0.2488562 (0.048)	0.5718796 (0.016)	0.1612668 (0.109)	0.4332542 (0.000)	0.6129217 (0.000)
WGI	0.0567089 (0.019)	0.1508356 (0.058)	-0.4677312 (0.000)	-0.5149818 (0.000)	-0.2174867 (0.000)	-0.1667543 (0.241)	-0.3566606 (0.033)	-0.0262079 (0.041)
K _{hdi}	–	3.725157 (0.003)	–	-2.040352 (0.026)	–	-4.431118 (0.002)	–	-2.396753 (0.000)
K _{gii}	–	-0.0001855 (0.721)	–	-0.0024075 (0.576)	–	0.034928 (0.000)	–	-0.0031851 (0.000)
K _{gfi}	–	-0.0019067 (0.047)	–	-0.0123434 (0.000)	–	0.0178937 (0.000)	–	-0.003122 (0.000)
const	0.3058566 (0.000)	-2.586592 (0.008)	0.075396 (0.001)	-1.70895 (0.013)	0.2662201 (0.000)	1.907149 (0.064)	0.7066809 (0.000)	-1.202864 (0.000)

(a) – calculation taking to account the integrated index of Public Governance efficiency; (b) – calculation taking to account the Public Governance efficiency and social determinants; in the brackets the statistical significance corresponds constants α .

Source: author's calculation.

After research results, the increase in the level of *Public Governance efficiency* by 1% will have the following consequences: for EU countries—an increase in macroeconomic stability by 5%; for Belarus and Armenia—a decrease in macroeconomic stability by 46%; for Georgia and Moldova—a decrease of 16%; for Ukraine—a decrease of 35%.

The convergence of social and political determinants of the MC (simultaneous increase in the level of *Public Governance efficiency* and social progress) was fixed only by the indicator HDI for the EU countries and indicators GII and PFI—for Georgia and Moldova.

Conclusions

1. The calculations confirmed that the Public Governance efficiency is a significant determinant of changes in the macroeconomic stability at the level of 1–5% for all groups of countries (with the exception of Georgia and Moldova, when applying the models considering convergent influence). Among the analysed countries, the index of Public Governance efficiency was at a low level with a negative sign, and decreasing it by 1% would have the following consequences: for Belarus, Armenia—macroeconomic stability reduced by 46%; for Georgia, Moldova—reduced by 16%; for Ukraine—reduced by 35%. At the same time, for EU countries, the Public Governance efficiency indicator had a positive sign that it is why the increase of it indicator by 1% led to the increasing of macroeconomic stability by 5%. The hypothesis about the convergence of the social and political determinants of the MS (simultaneous increase in the level of Public Governance efficiency and social progress) was confirmed only by the indicator KHDI for the EU countries and indicators KGII, KPFI for Georgia and Moldova.
2. Thus, according to the findings, the paradigm of governance management in the analysed countries (Belarus, Armenia, Georgia, Moldova, Ukraine) should be transformed to the direction on the concept of Good Governance.
3. This concept dominated among the analysed EU countries, based on the involvement of the society in the democracy principals. Therefore, under this concept, the efficiency of Public Governance could be estimated through the quality of collaboration between society and governance. At the same time, the involvement of the society relates to the level of social progress. In this case, implementing the Good Governance concept could decrease the government's transaction expenditures, which would have a significant impact on the level of the country's macroeconomic stability. It should be noted that effective realisation of the abovementioned activities would lead to the minimisation of bureaucracy; reduction of corruption; increasing of transparency in decision making at the government level; increasing of the Public Governance openness, increasing of the level of trust of Public Governance by the society and etc.

Acknowledgement

This research was funded by the grant from the Ministry of Education and Science of Ukraine (No. g/r 0118U003569 and 0117U003932).

References:

1. Alguacil M., Cuadros A., Orts V. (2011). Inward FDI and growth: The role of macroeconomic and institutional environment, *Journal of Policy Modeling*, 33(3), 481-496, <https://doi.org/10.1016/j.jpolmod.2010.12.004>
2. Arif U., Ahmad E. (2017). Growth Effects of Fiscal Decentralization: The Role of Macroeconomic Stability and Governance Institutions. *FWU Journal of Social Sciences*, 11(1), 276-289.
3. Bakari, I. H., Idi, A., & Ibrahim, Y. (2018). Innovation Determinants of Financial Inclusion in Top Ten African Countries: a System GMM Approach. *Marketing and Management of Innovations*, 4, 98-106. <http://doi.org/10.21272/mmi.2018.4-09>
4. Barro R J., Sala-I-Martin X. (2004). *Growth Models with Exogenous Saving Rates. Economic Growth (Second ed.)*. New York: McGraw-Hill.
5. Bayar Y. (2016). Public governance and economic growth in the transitional economies of the European Union. *Transylvanian Review of Administrative Sciences*, 12(48), 5-18.
6. Bhowmik D. (2018). Financial Crises and Nexus Between Economic Growth and Foreign Direct Investment. *Financial Markets, Institutions and Risks*, 2(1), 58-74.
7. Blanco-Encomienda F. J., Ruiz-García A. (2017). Evaluating the Sustainability of the Spanish Social Security System. *Economics and Sociology*, 10(4), 11-20. doi:10.14254/2071-789X.2017/10-4/1
8. Chychkalo-Kondratska I., Bezrukova N., Svichkar V. (2017). New “stars” of global economy: TICKS come to replace BRICS. *Journal of International Studies*, 10(3), 24-34. doi:10.14254/2071-8330.2017/10-3/2
9. Chygryn O. (2016). The mechanism of the resource-saving activity at joint stock companies: The theory and implementation features. *International Journal of Ecology and Development*, 31(3), 42-59.
10. Chygryn O., Petrushenko Y., Vysochyna A., Vorontsova A. (2018) Assessment of Fiscal Decentralization Influence on Social and Economic Development. *Montenegrin Journal of Economics*, 14(4), 69-84.
11. Dealing with macroeconomic imbalances (2017). Retrieved from https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/macro-economic-imbalance-procedure/dealing-macro-economic-imbbalances_en
12. Economist Intelligence Unit (2018). Retrieved from: <https://www.eiu.com/home.aspx>
13. Emara N., Chiu I. (2015). The impact of governance on economic growth: The case of Middle Eastern and North African countries. MPRA, Paper No. 68603. Online at <https://mpra.ub.uni-muenchen.de/68603/>
14. Fishburne P. (1978). Theory of utility for decision-making, *Management Science*, 352.

15. Gaygısız E. (2013). How are cultural dimensions and governance quality related to socio-economic development?. *The Journal of Socio-Economics*, 47, 170-179.
16. Global Competitiveness Index. (2018). Retrieved from: <http://reports.weforum.org/global-competitiveness-index-2017-2018/#topic=highlights>
17. Jovovic, R., Draskovic, M., Delibasic, M., Jovovic, M. (2017). The concept of sustainable regional development – institutional aspects, policies and prospects. *Journal of International Studies*, 10(1), 255-266. doi:10.14254/2071-8330.2017/10-1/18
18. Han X., Khan H., Zhuang J. (2014). Do governance indicators explain development performance? A cross-country analysis. *Economics Working Paper Series*, 417, Asian Development Bank. Retrieved from <https://www.adb.org/sites/default/files/publication/149397/ewp-417.pdf>.
19. Hansen L.P.; Heaton J.; Amir Y. (1996). Finite-sample properties of some alternative GMM estimators. *Journal of Business & Economic Statistics*. 14 (3): 262–280. doi:10.1080/07350015.1996.10524656. JSTOR 1392442.
20. Kaufmann D., Kraay A., Mastruzzi M. (2004). *Governance Matters III: Governance Indicators for 1996–2002*. World Bank Policy Research Working Paper No. 3106. Washington, DC: World Bank
21. Kaufmann D., Kraay A., Zoido-Lobaton P. (1999). *Governance Matters*. World Bank Policy Research Working Paper No. 2196. Washington, DC: World Bank.
22. Kaufmann D., Kraay, A. Zoido-Lobaton, P. (2002), *Governance Matters II: Updated Indicators for 2000-01*, World Bank Policy Research Working Paper No. 2772, Washington DC: World Bank.
23. Kolodko G. W. (1993). Stabilization, recession and growth in a postsocialist economy. *MOST: Most: Economic Journal on Eastern Europe and the Soviet Union*, 3(1), 3-38.
24. Krasnyak V., Chygryn O. (2015), Theoretical and applied aspects of the development of environmental investment in Ukraine, *Marketing and Management of Innovations*, 3, 226-234.
25. Lyeonov S. V., Vasylieva T. A., Lyulyov O. V. (2018). Macroeconomic stability evaluation in countries of lower-middle income economies. *Naukovyi Visnyk Natsionalnoho Hirnychoho Universytetu*, 1, 138-146. doi:10.29202/nvngu/2018-1/4
26. Lyulyov O. (2018). Macroeconomic stability and social progress in the EU member states and Ukraine. *Annals of Marketing Management & Economics*, 4(1), 53-64.
27. Lyulyov O., Chortok Y., Pimonenko T., Borovik O. (2015). Ecological and economic evaluation of transport system functioning according to the territory sustainable development. *International Journal of Ecology and Development*, 30(3), 1-10.
28. Manso P.J.R., de Matos A.J.F., Carvalho C.C.M. (2015). Determinants of Regional Growth in Portugal: An Empirical Analysis, *Economics and Sociology*, 8(4),11-31. doi: 10.14254/2071-789X.2015/8-4/1
29. Marino, P.D.B.L.P., Soares R.A., Luca M.M.M.D., Vasconcelos A.C.D. (2016). Global Governance Indicators: how they relate to the socioeconomic indicators of the Brics countries. *Revista de Administração Pública*, 50(5), 721-744.
30. Mehanna R., Yazbeck Y., Saredidine L. (2010). Governance and Economic Development in MENA Countries: Does Oil Affect the Presence of a Virtuous Circle? *Journal of Transnational Management*, 15 (2), 117-150.

31. Nguedie, Y. H. N. (2018). Corruption, Investment and Economic Growth in Developing Countries: A Panel Smooth Transition Regression Approach. *Socio Economic Challenges*, 2(1), 63-68.
32. Pilia Giulia (2017). Estonia and Lithuania in transition: A compared analysis of the change and its costs and benefits. *Business Ethics and Leadership*, 1(2), 78-95.
33. Prince, T. (2017). Behavioral Finance and the Business Cycle. *Business Ethics and Leadership*, 1(4), 28-48.
34. Raphael L. (2018). A new economic order for global prosperity. *Socio Economic Challenges*, 1(2), 52-58.
35. Regulation No 1176/2011 of the European parliament and of the council of 16 November 2011 on the prevention and correction of macroeconomic imbalances <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:306:0025:0032:en:PDF>
36. Rodrik D. (2014). The Past, Present, and Future of Economic Growth, *Challenge*, 57(3), 5-39, DOI: 10.2753/0577-5132570301
37. Salter A., Tarko V. (2017). Polycentric banking and macroeconomic stability. *Business and Politics*, 19(2), 365-395. doi:10.1017/bap.2016.10
38. Solow R. (1956). A contribution to the theory of economic growth. *Quarterly Journal of Economics*, 70 (1), 65-94.
39. United Nations (1990). United Nations Development Programme. Human development report. Nova York: Oxford, 1990.
40. Vasylieva T., Lyeonov S., Lyulyov O., Kyrychenko K. (2018). Macroeconomic stability and its impact on the economic growth of the country. *Montenegrin Journal of Economics*, 14(1), 159-170. doi:10.14254/1800-5845/2018.14-1.12
41. Vasylieva T.A., Kasyanenko V.O. (2013). Integral assessment of innovation potential of Ukraine's national economy: A scientific methodical approach and practical calculations. *Actual Problems of Economics*, 144(6), 50-59.
42. Yimer A. (2017). Macroeconomic, Political, and Institutional Determinants of FDI Inflows to Ethiopia: An ARDL Approach. In: Heshmati A. (eds.) *Studies on Economic Development and Growth in Selected African Countries. Frontiers in African Business Research*. Springer, Singapore.
43. Zaman C., Drcelic B., (2009). Macro-stabilisation issues in the Serbian Economy: Methodological Evaluation. Retrieved from <http://ssrn.com/abstract=1521660>.
44. Żelazny R. (2017). Determinants and measurement of smart growth: evidence from Poland. *Journal of International Studies*, 10(1), 34-45. doi:10.14254/2071-8330.2017/10-1/2

Yuriy Bilan, Agota Giedrė Raišienė, Tetyana Vasilyeva,
Oleksii Lyulyov, Tetyana Pimonenko

Viešojo valdymo efektyvumas ir makroekonominis stabilumas: socialinių ir politinių veiksnių konvergencijos reikšmė

Anotacija

Straipsnio tikslas - pristatyti "Fishburne" metodu pagrįstą integruotą viešojo valdymo efektyvumo indeksą, sudarytą atsižvelgiant į skirtingų subrodiklių galios ir krypties poveikį makroekonominiam stabilumui, o taip pat - į multikolinearumo problemą. Tyrimui buvo pasirinkta 11 Europos šalių, turinčių bendro pobūdžio broužų politinės ir ekonominės raidos srityse, tai: Lietuva, Latvija, Lenkija, Bulgarija, Kroatija, Rumunija, Armėnija, Baltarusija, Gruzija, Moldova ir Ukraina.

Tyrimo rezultatai parodė, jog egzistuoja ryšys tarp politinių ir socialinių veiksnių bei makroekonominio stabilumo visose šalyse. Be to, tyrimas atskleidė viešojo valdymo ir visuomenės tarpusavio priklausomybės svarbą: viešojo valdymo efektyvumas negali būti pasiektas be visuomenės paramos, o visuomenė negali bendradarbiauti su neefektyvia valdžia. Todėl šalims siekiant ekonominio konkurencingumo tarptautiniu mastu reikalingas viešasis valdymas, kuris leistų formuoti šalies ekonominių ir socialinių tikslų vientisumą užtikrinančią politiką.

Yuriy Bilan – Socialinių mokslų universiteto (Lenkija) docentas, habilituotas mokslų daktaras.
E. paštas: yuriy_bilan@yahoo.co.uk

Yuriy Bilan – Dr. hab., Associated Professor at University of Social Sciences, Poland.
E-mail: yuriy_bilan@yahoo.co.uk

Agota Giedrė Raišienė – Lietuvos agrarinės ekonomikos instituto vyriausioji mokslo darbuotoja, socialinių mokslų daktarė.
El. paštas: agota.raisiene@laei.lt

Agota Giedrė Raišienė – Doctor of Social Sciences, Principal researcher at Lithuanian Institute of Agrarian Economics.
E-mail: agota.raisiene@laei.lt

Tetyana Vasilyeva – Valstybinio Sumy universiteto (Ukraina) profesorė, socialinių mokslų daktarė.
El. paštas: tavasilyeva@fem.sumdu.edu.ua

Tetyana Vasilyeva - Doctor of Economics, Professor at Sumy State University, Ukraine.
E-mail: tavasilyeva@fem.sumdu.edu.ua

Oleksii Lyulyov – Valstybinio Sumy universiteto (Ukraina) docentas, socialinių mokslų daktaras.
El. paštas: alex_lyulev@econ.sumdu.edu.ua

Oleksii Lyulyov - Ph.D., Associate Professor at Sumy State University, Ukraine.
E-mail: alex_lyulev@econ.sumdu.edu.ua

Tetyana Pimonenko – Valstybinio Sumy universiteto (Ukraina) docentė, socialinių mokslų daktarė.
El. paštas: tetyana_pimonenko@econ.sumdu.edu.ua

Tetyana Pimonenko - Ph.D., Associate Professor at Sumy State University, Ukraine.
E-mail: tetyana_pimonenko@econ.sumdu.edu.ua

Annex 1

Table – Descriptive statistics of the used variables in the period from 2000 to 2017

Country	Descriptive statistics	MS	K_{hdi}	K_{gii}	K_{pfi}
Ukraine	Mean	0.45025	0.729286	28.76	35.69167
	Std. Dev.	0.1379408	0.013848	14.66943	11.44866
	CV	0.306365	0.018988	0.510064	0.320766
Lithuania, Latvia, Poland, Bulgaria, Croatia, Romania	Mean	0.3541222	0.81	32.54	15.75
	Std. Dev.	0.0969743	0.021876	16.01174	8.75707
	CV	0.273844	0.027007	0.492063	0.556004
Armenia, Belorussia	Mean	0.3326562	0.737771	34.23125	44.10258
	Std. Dev.	0.1664562	0.047515	2.766945	20.36157
	CV	0.500385	0.064403	0.080831	0.461687
Georgia, Moldova	Mean	0.3198437	0.694771	36.64313	28.15875
	Std. Dev.	0.1114263	0.048199	2.853668	7.364718
	CV	0.348377	0.069374	0.077877	0.261543

Indicator WGI showed in table 2 of paper