"Public finance management system in modern conditions"

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PUBLIC FINANCE MANAGEMENT SYSTEM IN MODERN CONDITIONS

Abstract

The public finance management system is an important lever for equalizing financial and budgetary disproportions in the context of institutional changes. The paper aims to substantiate the directions of development of the public financial management system. Economic and statistical methods and correlation-regression analysis methods are used to determine the relationship between the GDP deflator and the share of revenues, expenditures, the general government budget deficit, and public debt in GDP, assessing the features of the public financial management system in Ukraine and EU countries. This study reveals that one of the main restraining factors in the public finance system development is a significant level of uncertainty in economic processes, which intensifies macroeconomic fluctuations, significant indicators of the share of public debt and budget deficit of the state administration sector pose risks to financial and economic stability; their potential negative impact on socio-economic processes is much more destructive than the pro-cyclical nature of fiscal policy. From this point of view, the public finance management system should be directed at optimizing financial and budgetary tools to prevent the growth of public debt and budget deficit in gross domestic product, which determines the importance of substantiating further development directions of the public financial management system. It is concluded that the mechanism of public financial management in recent years is quite rigid and restrictive, in the context of institutional change expands the tools of public financial management and increases its impact on socio-economic processes.

Keywords	finance, economy, revenues, expenditures, deficit, debt, EU, Ukraine
JEL Classification	H30, H60, D78, G18, G28

INTRODUCTION

Reform of the public finance management system is one of the main components of the reform package in both countries with economies in transition and developed economies. Sound management of public finance is one of the most important factors in ensuring countries' competitiveness. Effective management tools in the field of public finance provide for the efficiency and coherence of public authorities' activities at different levels. Simultaneously, qualitative public finance management system is an important prerequisite for democratic governance. This highlights concern for finding ways to improve public finance management system as a fundamental basis for public relations development.

Globalization leads to risks range deepening and expansion that violate the stability and sustainability of public finance and consequently cause the importance of their management system enhancement, actualize the problem of improving methodology and integrated information-analytical system public finance management, changes in the vectors of its development and updating tools. Improving the quality level of the system public finance management is a fundamental basis for economic diversification, its volatility level reduction. Institutional changes in the financial and economic environment complicate socio-

economic processes at both the micro and macro levels, which augments the need to ensure the steadiness and stability of the public finance system. This highlights the issue of finding ways to improve public finance management as a fundamental basis for the development of public relations.

1. THEORETICAL BASIS

In the context of institutional changes, both scholars and politicians determine the importance of public finance management system components integration. Attempts to ensure their interpenetration and coherence in both developed and transition economies show that it is not always easy to predict relevant processes based on causality assessment of the public financial management instruments impact on macroeconomic stability (Van Hijum, 1998; Mumtaz & Theodoridis, 2020; Davoine & Molnar, 2020). It is determined that effective fiscal consolidation is possible only in economic growth conditions (Niemann & Pichler, 2020; Suescun, 2020).

The concept of structural budget balance, adherence to the Maastricht convergence criteria as to the budget deficit and public debt level become of great importance in public finance management. This is due to the significance of obtaining a reliable assessment of the impact of public finance on the socio-economic environment and countercyclical fiscal policy implementation, reducing economic volatility. However, although public finance development strategies in the vast majority of countries with both developed and transition economies are countercyclical, fiscal policy in many countries is pro-cyclical at this stage (Gootjes & de Haan, 2020; Rathnayake, 2020). The only prominent trend of countercyclical changes in the public debt level is observed here. Nevertheless, it is determined that with a low level of public debt, fiscal policy is countercyclical, as government agencies respond to low output by setting low tax rates. However, when the justified share of public debt in the gross domestic product is exceeded, pro-cyclical fiscal policy is determined as optimal (Camous & Gimber, 2018). It is corroborated that a public debt management mechanism that presupposes public debt constraint has a negative effect on accelerating economic growth, but it creates conditions for intergenerational compromise in terms of public welfare provision (Nakagawa et al., 2018).

There is also a negative correlation between the share of the state budget deficit in gross domestic product and the level of economic growth (Arjomand et al., 2016). It is substantiated that the impact of the state budget deficit on the level of economic growth is much more significant than the public debt (Kameda, 2014). There is strong evidence that the deterioration of macroeconomic balance occurs when fiscal policy is aimed at reducing government investment (Cavalcanti et al., 2018). The implementation of public finance management measures aimed at increasing public spending stimulates private investment (Corrocher & Cappa, 2020; Takyi & Leon-Gonzalez, 2020), increasing investment helps to accelerate economic growth (Makohon et al., 2020). Simultaneously, exceeding a reasonable level of government spending and uncertainty in economic processes may lead to higher inflation (Bretscher et al., 2020). That is why additional expenditures in the general government sector must not replace investments (Chugunov et al., 2020).

Many scientific studies focus on implementing monetary and fiscal policy; identification of their shocks based on the scientific and metric models development; fiscal consolidation spheres, and their evaluation in the short, medium, and long term (Marfatia et al., 2020). Significant attention is focused on the changing vectors of monetary and fiscal policy and their impact on macroeconomic processes. It is determined that an important task in the context of the institutional changes is the complementarity of monetary and fiscal policy instruments aimed at macroeconomic processes stabilization (Büyükbaşaran et al., 2020). At the same time, it is substantiated that "expansive monetary policy implementation can have an unambiguously positive impact on socio-economic processes, while expansive fiscal policy implementation is ambiguous; expansive fiscal policy realization affects the deterioration of prices, but does not have a significant impact on interest rates; coordinated rather than divergent monetary and fiscal policy measures help to accelerate economic growth and ensure macroeconomic stability" (Tule et al., 2020).

It is corroborated that monetary policy should be actively aimed at regulating inflation, while fiscal policy should be aimed at smoothing the tax burden level, ensuring debt security. A certain level of irrationality is determined in the monetary policy application aimed at public financial management system distortions compensation (Leeper et al., 2020).

A significant task to augment the public financial management system efficiency is developing new approaches to managing uncertainty, which is a significant factor in macroeconomic fluctuations (Anzuini et al., 2020; Aursland et al., 2020). It is particularly corroborated that countries with a significant political instability degree have a much higher level of tax burden and public debt (Rieth, 2017).

Despite the significant range of research on the development of public financial management system, there is a lack of information on the validity of the use of modern financial and budgetary tools to improve the efficiency of this system. Accordingly, this study aims to substantiate the directions of development of the public financial management system. The working hypothesis is the feasibility of public finance management a comprehensive combination of budget, tax, and monetary mechanisms, taking into account the level of development of institutional support, the impact of exogenous and endogenous factors on the public finance system.

2. RESULTS

The appropriate level of public finance management efficiency is defined as one of the main principles for strengthening European integration processes (SIGMA, 2015). The main public financial management system tasks at this social development stage include: maintaining the dynamic balance of budgets at different levels; substantiation of clear public finance management guidelines for a specific period, ensuring continuity of fiscal priorities; assessment of the public financial management system real possibilities to establish expenditures by priority areas; setting up "barriers" to unreasonable proposals concerning costs increase that threaten macroeconomic stability. The specified problem solution involves determin-

ing probable indicators of government revenue and expenditure for the future. For this purpose, it is advisable to assess the current impact of state administration decisions, programs, and policies on social development, to analyze the possibilities of balancing public revenue and expenditure.

There is currently an increase in the share of revenue and a decrease in the share of general government expenditure in GDP of the EU countries. In 2008–2019, the share of general government revenue in GDP of the EU countries constituted 44.56%, including 43.67% in 2008–2010, 44.73% in 2011–2013, 44.83% in 2014–2016, 45.00% in 2017–2019. The share of the general government expenditure in GDP of the EU countries for 2008–2019 amounted to 47.65%, including 48.87% for 2008–2010, 48.77% for 2011–2013, 47.13% for 2014–2016, 45.83% for 2017–2019 (Table 1).

With the growth of the general government revenue share in GDP for 2017–2019, the GDP deflator grew by 9.46 percentage points. The regression equation is the following: $y = 9.46x - 315.03$; R^2 0.63. With the growth of the share of general government expenditure in GDP for 2017–2019 years, the GDP deflator decreases by 28.38 percentage points. The regression equation has the following form: $y = 1411.72 - 28.33x$; R^2 0.63.

Under such conditions, public administration bodies adopt programs to achieve more acceptable ratios between revenues and expenditures of the state administration sector. To limit imbalances, programs are developed for strengthening fiscal consolidation; principles of fiscal regulation are substantiated, taking into account the impact of crisis processes on the state administration sector; measures are implemented to increase the transparency of the fiscal sphere, fiscal adjustment.

There is a decrease in the deficit share for 2008–2019 and the public debt share in GDP (over the past three years). For 2008–2019, the share of EU public debt in GDP constitutes 80.43%, including 71.63% for 2008–2010, 84.23% for 2011–2013, 85.23% for 2014–2016, 80.60% for 2017–2019. The share of the EU deficit in GDP for 2008–2019 amounts to 3.11%, including 5.17% for 2008–2010, 4.07% for 2011–2013, 2.33% for 2014–2016, 0.87% for 2017–2019. The largest share of the general gov-

Table 1. Total general government revenue, expenditure % of GDP

Years / Country	2008–2010		2011–2013		2014–2016		2017–2019	
	Revenue	Expenditure	Revenue	Expenditure	Revenue	Expenditure	Revenue	Expenditure
EU (28 countries)	43.67	48.87	44.73	48.77	44.83	47.13	45.00	45.83
Belgium	49.57	53.13	52.07	55.97	51.50	54.13	50.97	52.10
Bulgaria	35.70	37.60	34.50	35.40	37.23	39.57	37.63	35.93
Czech Republic	38.90	42.77	40.73	43.37	40.70	41.37	41.77	40.87
Denmark	53.77	54.53	54.50	56.73	54.00	54.07	52.50	50.57
Germany	44.30	46.83	44.77	45.00	45.13	44.20	46.30	44.80
Estonia	40.10	41.67	38.43	38.10	38.87	38.73	38.60	39.13
Ireland	33.67	51.30	34.00	43.07	29.33	31.43	25.47	25.40
Greece	40.30	52.47	46.67	57.43	48.03	50.97	47.93	46.87
Spain	36.13	44.53	37.70	46.90	38.67	43.80	38.83	41.60
France	50.00	55.80	52.10	56.87	53.17	56.90	53.17	55.93
Croatia	42.63	47.73	42.33	48.53	45.07	48.23	46.70	46.23
Italy	45.67	49.60	47.10	50.27	47.47	50.10	46.57	48.67
Cyprus	37.70	40.77	36.77	42.47	39.33	42.47	39.93	39.90
Latvia	35.80	43.30	37.13	39.43	37.40	38.33	38.53	39.13
Lithuania	35.47	41.83	33.23	38.10	34.43	34.67	34.47	34.03
Luxembourg	44.03	43.07	44.07	43.43	43.20	41.67	44.57	42.33
Hungary	45.20	49.57	46.23	49.67	47.13	49.33	44.33	46.60
Malta	38.60	41.87	39.17	41.93	38.47	39.13	38.70	36.77
The Netherlands	42.80	46.20	42.93	46.70	43.27	44.63	43.63	42.17
Austria	48.53	52.27	49.00	51.23	49.47	51.20	48.73	48.70
Poland	38.80	44.87	38.83	43.13	38.83	41.73	40.80	41.57
Portugal	40.83	49.13	43.30	49.60	43.70	48.23	42.73	43.83
Romania	31.90	39.00	33.70	37.40	33.83	35.30	31.47	34.77
Slovenia	43.93	48.23	45.10	53.53	45.17	48.60	44.17	43.80
Slovakia	35.17	41.20	37.67	41.57	41.17	43.93	40.90	42.03
Finland	51.70	51.97	53.40	55.30	54.10	56.50	52.60	53.50
Sweden	51.43	51.00	50.00	50.87	49.83	50.03	50.37	49.47
The United Kingdom	38.13	46.30	38.00	45.10	37.80	42.30	38.77	41.03

ernment budget deficit in gross domestic product for 2008–2019 years is observed in Ireland – 7.18%, Spain – 6.38%, Greece – 6.20%, Great Britain – 5.50%, Portugal – 5.08%, France – 4.25%, Slovenia – 3.92%, Romania – 3.90%, Poland – 3.51%, Croatia – 3.51%. Slovakia – 3.46%, Hungary – 3.03%. oThe general government budget surplus for the corresponding period is observed only in Sweden – 0.07% and Luxembourg – 1.32% (Table 2).

Simultaneously, efforts to reduce the level of public debt did not provide an opportunity for a rad-

ical solution to this issue. The share of public debt in the gross domestic product of the EU as a whole exceeds the permissible level of 60%. The highest corresponding indicator for 2008–2019 is observed in Greece– 163.23%, Italy – 127.49%, Portugal – 116.65%, Belgium – 102.06%, France – 90.99%, Cyprus – 84.72%, Spain – 83.03%, Ireland – 82.14%, Great Britain – 79.37%, Austria – 79.28%, Hungary – 75.44 %, Germany – 72.04%, Croatia – 69.75%, Malta – 60.00%. The share of public debt in gross domestic product less than 60% for the corresponding period is observed in such countries as Estonia

– 8.44%, Bulgaria – 20.13%, Luxembourg – 20.55%, Romania – 32.63%, Lithuania – 35.56%, Czech Republic – 37.13%, Latvia – 38.62%, Denmark – 39.61%, Sweden – 39.83%, Slovakia – 46.84%, Poland – 51.37%, Finland – 53.83%, Slovenia – 59.74%, the Netherlands – 59.88%, Estonia – 8.44%.

With the growth of the public debt share in GDP for 2017–2019, the GDP deflator decreases by 1.42 percentage points. The regression equation has the following form: $y = 225.00 - 1.42x$; R^2 0.94. With the deficit share in GDP increasing for 2017–2019, the GDP deflator grows by 6.19 percentage points. The regression equation has the following form: $y = 6.19x + 116.11$; R^2 0.39.

Based on the above, it is worth noting that positive results in the fiscal sphere should be associated with the achievement of acceptable budget deficit indica-

tors and reducing public debt growth and the creation of conditions to support sustainable economic growth through effective governance in the public finance field. At the same time, countries' position in the relevant rankings indicates the public financial management system effectiveness. In the context of the COVID-19 pandemic, the task of increasing government spending on health has become important. According to Centre for Human Technologies (2020a), the relevant costs share of more than 10% is observed in 23 EU countries; from 8 to 10% in 32 countries; from 5 to 8% in 75 countries (Table 3).

In the contemporary reality of both the EU and transition economy countries, of particular importance is the coordination of fiscal policy with macroeconomic problems, both current and projected, and elaborating fiscal strategy on this basis, which is aimed at the country's sustainable development.

Table 2. General government gross debt, deficit/surplus % of GDP

Source: Based on the data from Eurostat.

Years Country	2008–2010		2011–2013		2014–2016		2017–2019	
	Debt	Deficit/surplus	Debt	Deficit/surplus	Debt	Deficit/surplus	Debt	Deficit/surplus
EU (28 countries)	71.63	−5.17	84.23	−4.07	85.23	−2.33	80.60	−0.87
Belgium	97.90	−3.53	104.60	−3.90	105.70	−2.63	100.03	−1.13
Bulgaria	14.03	−1.83	16.33	−0.90	27.47	−2.33	22.67	1.73
Czech Republic	33.10	−3.90	43.07	−2.60	39.67	−0.67	32.70	0.90
Denmark	38.70	−0.77	45.00	−2.27	40.43	0.00	34.30	2.07
Germany	73.63	−2.57	79.87	−0.30	72.33	0.90	62.33	1.50
Estonia	6.10	−1.53	8.70	0.33	10.27	0.10	8.70	−0.57
Ireland	63.30	−17.63	116.97	−9.03	84.97	−2.10	63.33	0.07
Greece	127.43	−12.17	169.70	−10.80	177.77	−2.90	178.00	1.07
Spain	51.17	−8.47	84.00	−9.13	99.73	−5.13	97.23	−2.77
France	79.03	−5.80	90.60	−4.77	96.17	−3.70	98.17	−2.73
Croatia	48.60	−5.10	71.90	−6.20	83.27	−3.20	75.23	0.47
Italy	114.00	−3.97	126.23	−3.13	135.17	−2.67	134.57	−2.07
Cyprus	52.10	−3.07	83.40	−5.70	106.70	−3.13	96.67	0.00
Latvia	34.53	−7.53	42.20	−2.30	39.93	−0.93	37.80	−0.60
Lithuania	26.30	−6.37	38.57	−4.90	40.97	−0.23	36.40	0.47
Luxembourg	17.23	0.97	21.57	0.63	21.60	1.47	21.80	2.20
Hungary	76.87	−4.37	78.93	−3.37	76.17	−2.20	69.80	−2.20
Malta	65.90	−3.27	68.80	−2.77	58.97	−0.57	46.33	1.90
The Netherlands	56.90	−3.37	65.20	−3.73	64.77	−1.40	52.63	1.47
Austria	77.10	−3.73	81.87	−2.27	83.93	−1.73	74.23	0.03
Poland	50.00	−6.10	54.87	−4.27	52.13	−2.87	48.47	−0.80
Portugal	87.87	−8.33	124.93	−6.33	131.87	−4.57	121.93	−1.07
Romania	21.23	−7.13	36.20	−3.73	38.10	−1.47	35.00	−3.27
Slovenia	31.53	−4.27	56.70	−8.40	80.53	−3.40	70.20	0.40
Slovakia	35.33	−6.03	50.00	−3.93	52.47	−2.77	49.57	−1.10
Finland	40.33	−0.27	52.70	−1.90	62.20	−2.37	60.10	−0.90
Sweden	38.90	0.40	38.43	−0.87	43.73	−0.17	38.23	0.90
The United Kingdom	62.43	−8.17	82.50	−7.07	86.63	−4.50	85.77	−2.27

Table 3. The World Bank rating

Source: Based on the data from Centre for Human Technologies (2020b), Centre for Human Technologies (2019), Centre for Human Technologies (2020a).

RATING (1)	Country	GDP (USD bln)	RATING (2)	Country	Index	RATING (3)	Country	The share of health care expenditures in GDP, %
1	USA	21,428	1	Singapore	84.8	1	Tuvalu	17.1
2	China	14,343	2	USA	83.7	2	USA	17.1
3	Japan	5,082	3	Hong Kong	83.1	3	Marshall Islands	16.4
4	Germany	3,846	4	The Netherlands	82.4	4	Sierra Leone	13.4
5	India	2,875	5	Switzerland	82.3	5	Micronesia	12.4
6	UK	2,827	6	Japan	82.3	6	Switzerland	12.3
7	France	2,716	7	Germany	81.8	7	Palau	12.0
8	Italy	2,001	8	Sweden	81.2	8	Afghanistan	11.8
9	Brazil	1,840	9	UK	81.2	9	Cuba	11.7
10	Canada	1,736	10	Denmark	81.2	10	France	11.3
57	Ukraine	154	85	Ukraine	57.0	75	Ukraine	7.0

The fiscal strategy should predict public financial management system reactions to the challenges and opportunities that may arise within the various world economy growth options. It should anticipate the preventive application of an adequate set of measures under the negative external and internal economic factors influence. The presence of a legally specified fiscal strategy allows: to eliminate the multi-vector priorities of state development, to balance financial revenues and expenditures, to create an effective mechanism for concentrating resources to solve medium-term and long-term problems. In this context, an important management tool is forecasting, which assesses the impact of current fiscal policy, socio-economic trends, probabilities, and enables to combine the components of public finance management to achieve strategic socio-economic development goals and prevent adverse events through timely application of public financial management system tools; improve quality of financial decision-making; substantiate alternative ways of solving existing problems in the public administration field; supply quality assessment of budget proposals and corresponding decision-making by public administration bodies; ensure openness of the public financial system management and transparency of state authorities decision-making.

3. DISCUSSION

In institutional changes conditions, the problems of the public and private instruments implementation effectiveness for regulating socio-economic processes (James et al., 1996); public funding efficiency (Jandová & Paleta, 2019), as well as justification of public finance management vectors that favor public spending reduction over tax increases (Ardanaz et al., 2020) remain controversial. Various public and private sector participation models are being developed to restore economic growth (Noring, 2019).

Besides, there are different norms on the reasonable share of public debt in gross domestic product. According to the Stability and Growth Pact, this share can be up to 60% (The European Commission, 2011); the Treaty on the Eurasian Economic Union – up to 50% (EAEU, 2014); the classification of the World Bank – from 18 % to 80% (official World Bank site).

The most controversial issues are the definition and evaluation of a range of factors that positively and negatively affect the quality of the public financial management system, taking into account the time frame (temporary impact and long-term impact). Based on the above mentioned, public administration bodies develop their approaches and public financial management criteria. Among the priority approaches to public finance management are: ensuring fiscal stability and sustainability through the implementation of fiscal policy based on clearly defined criteria and norms; reducing the share of public sector debt in GDP and maintaining a safe level of structural budget deficit; development of effective models of fiscal forecasting; op-

timization of the structure of budget indicators taking into account the level of economic development of countries; increasing the validity of the applied instruments of public finance management, which provides for the development of financial and budgetary tools and increasing the

responsibility of public administration bodies; development of new approaches to public investment; development of public-private partnership mechanisms; concentration of public financial resources on the support of leading sectors of economic development.

CONCLUSION

The conducted study enables to determine that in the context of institutional change, the tools of public finance management system are expanding, and its impact on socio-economic processes is increasing. The analysis of revenues, expenditures, budget deficits of the state administration sector, and public debt of the EU countries shows that the governance mechanism has been quite stringent and restrictive in recent years. At the same time, since public debt and budget deficit share of the state administration sector as a significant indicator poses risks to financial and economic stability, its potential negative impact on socio-economic processes is much more devastating than the pro-cyclical nature of fiscal policy, which affects economic dynamics in the short term.

From this point of view, in the context of institutional change, the development of public financial management system should be aimed at optimizing financial and budgetary tools to prevent the growth of public debt and budget deficit in gross domestic product, which determines the importance of justifying further development of public financial management.

The important areas of development of the public financial management system are: the development of an effective multifaceted mechanism that provides opportunities to ensure the reliability and predictability of public administration bodies actions, their decision-making based on legally defined rules; carrying out a systematic assessment of the public finance management effectiveness; strengthening the responsibility of state authorities for actions and inactions; maintaining an appropriate level of the government revenues and expenditures ratio. The obtained results show that one of the main restraining factors in the public finance system development is a significant level of economic process uncertainty, which exacerbates macroeconomic fluctuations and accordingly violates the stability of the public finance system. Disclosure of the theoretical and methodological aspects of the public finance management system, assessing the regression relationship between the GDP deflator and the share of revenues, expenditures, general government budget deficit, and public debt in the GDP of the EU countries testify to the need for countercyclical fiscal policy implementation. The use of public finance management tools based on forecasting socio-economic trends and budget parameters provides an opportunity to improve its qualitative level.

Future research should be carried out to find new scientific approaches to the public financial management development, substantiation of norms and criteria of countries' fiscal and budgetary security, taking into account their development level and peculiarities.

AUTHOR CONTRIBUTIONS

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Methodology: Julia Tabenska.

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