Effective Ways of Improving Georgian State and Consolidated Budget Expenditure Challenges

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Abstract: The government's role, in the aspect of country development, has always been the most significant and observable subject. However, the size of the government involvement, ratio consisting sum of assigned budget expenditures alongside with non-financial assets on Gross Domestic Product (GDP), has always been in close scrutiny. Moreover, it is crucial to keep described ratio minor or has a tendency of decreasing, as reduced government involvement helps countries economy to grow naturally by encouraging the privet sector. Thus, current study gives possibility of assessing and analyzing mentioned trend, from 2002 to 2017 years scale, and pays vital attention on expenditure components and tendencies. Furthermore, the study identifies specific econometric model in which each budget expenditure parameters and non-financial assets effect on the country's GDP is defined individually. Thus, efficiently helping for future budgetary planning. Significantly, the research implies much needed long term budgetary strategic planning components and provides several recommendations on that matter. Furthermore, it is very important that the study identifies and leaves possibilities for future research, as to more fundamentally and individually being analyzed not only positively affecting budgetary expenditure classificatory parameters, on economic growth, but those with negative effects.

Keywords: Georgia, Budget, Fiscal policy, Expenditure, Econometric Model, GDP, Economy, Education, Defense, Health, Social Protection, Time series, OLS, Heteroscedasticity.

Introduction

Budgeting and its effective control, in most cases, are reviewed as main tool in hands of governments. Consequently, it is used to derive much needed resources from the country's economy and distribute them according to effective and productive management manner, in order to achieve planed aims and key strategies that best serve countries interest. Additionally, transforming those planed aims and key strategies onto the quantitative financial context is known as Budgeting and establishing an effective mechanism to achieve the desired result is known as budget control.

In recent years, the management of state budget resources has become extremely applicable not only developed, but in developing countries and mainly is caused by the undesirable macroeconomic outcomes, widely expressed in rising national debt and budget deficits across the nations. In response to this problem, in 1998 the World Bank developed and has implemented in practice Public Expenditure Management (PEM) approach.

The main principles and objectives of the PEM are mainly focusing on three approaches: Macro financial discipline, strategic prioritization (allocative efficiency) and operational performance (technical efficiency). Moreover, this guideline widely reviews the methods of development of the PEM and argues that the following components are required to maintain desired development rate:

- "A greater focus on performance - the results achieved with expenditure.
- Adequate links between policy making, planning and budgeting.
- Well-functioning accounting and financial management systems.
- Attention to the links between budgeting and financial management systems and other service-wide systems and processes of government for decision making, for organizing government, for personnel management."

Additionally, the core principles and approaches of the handbook are implying internationally recognized main principles that represent foundation of the healthy budget forming and financial management.

"Consequently, these principles will be formed as follows:

- **Comprehensiveness and discipline** lead the list. This is because the annual budget process is the only mechanism available, at least between elections, to discipline decision makers.
- **Legitimacy** means that decision makers who can change policies during implementation must take part in and agree to the original policy decision, whether it is made independent of or during budget formulation. Legitimacy also means that decisions made during the budget process should focus on those that affect policy. Associated with legitimacy is the principle that line agencies should decide how to make best use of inputs and that the community and the private sector should make decisions that they are best placed to make.
- **Flexibility** is linked to the concept of pushing decisions to the point where all relevant information is available. Operationally, managers should have authority over managerial decisions and, programmatically, individual ministers should be given more authority over program decisions. This must be accompanied by transparency and accountability, but it also requires a tight strategy. Too often in the public sector, implementation is tight but strategy loose.
- **Predictability** is important for efficient and effective implementation of policies and programs. The public sector will perform better where there is stability in macro and strategic policy, and funding of existing policy. This requires attention to the balance

between the short term and long term. Fiscal policy must take account of the need to ensure the timely flow of funds to programs and projects. This requires a medium-term approach to the adjustment of budgetary imbalances, program development and evaluation.

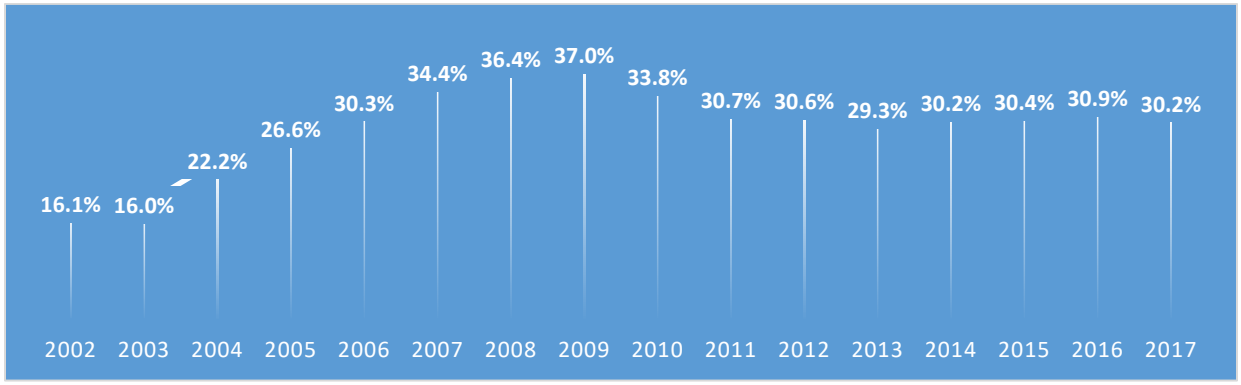
- **Contestability** in policy development and service provision is the quid pro quo for greater predictability as it ensures that existing policy is subject to review and evaluation and that line agency performance is subject to continuous improvement.
- **Honesty** denotes a budget derived from unbiased projections of both revenue and expenditure. Sources of bias can be both technical and political. Optimistic projections soften the budget constraint on strategic priority setting and lead to a failure to implement priority policies efficiently and effectively.
- **Information** underpins honesty and sound decision making. Accurate and timely information on costs, outputs and outcomes is essential.
- **Transparency** and accountability require that decisions, together with their basis and the results and the costs, be accessible, clear and communicated to the wider community. Transparency also requires that decision makers have all relevant issues and information before them when they make decisions. Decision makers must be held responsible for the exercise of the authority provided to them."

Problem Identification

The essence of the problem is mainly originated from the 2017 annual report of State Audit Office of Georgia's on implementation of the state budget. The report identifies expected oversights of the fiscal rules. Specifically, the finding explains that the report does not contain information about fulfillment of the rules and its compliance with the established limit (30%) laid by specific organic law. Thus, in 2017 as in previous years, the rule of expenditure has been violated and marginally exceeding outlined treshhold. In order to guarantee the Fiscal stability of the country, some fiscal rules have been developed. Particularly, the Organic Law on Economic Freedom, (Matsne.gov.ge) which explains that "freedom is the basic principle of economic policy, which is reflected in the small size of the government, responsible macroeconomic policies and low taxes". Based on that the law prescribes strict restrictions and defines the upper ceiling of the consolidated budget expenditures and non-financial assets as a share of GDP, no more than 30%.

Crucially, the small and effective size of the government is the main signal to local and foreign investors. Since, the lesser the bureaucracy and the state intervention, the more space and the area of action is left for private business development.

Although, the State Audit Office's report covers a four-year period from 2014 to 2017, the study covers the 16 years tendency between 2002 and 2017. If we closely look at below **graph 1**, we could see that since 2004 the combination of budgeted current and capital expenditures are characterized by a growing tendency, peaking at 37% in 2009. However, the subsequent tendency is declining and ranges around 30-31% from 2011 to 2017, which still is a violation of the law.

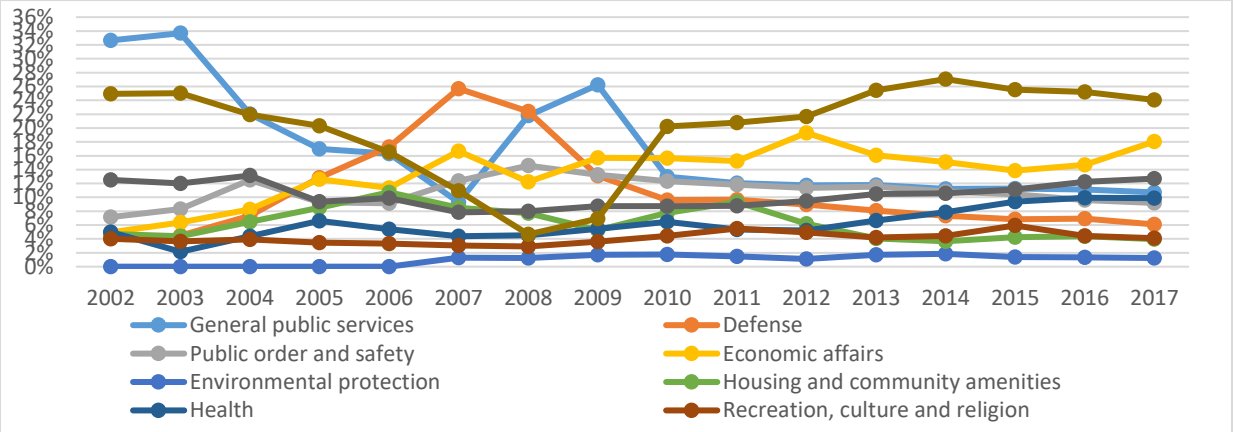


Graph 1: Share of total expenditure in GDP

What is more, in order to successfully accomplish research purpose the study is widely implying Government finance Statistics Manual 2014 editions core concepts developed by the International Monetary Fund and all the internationally recognized classifications of expenditure by functions of government according to divisions and groups defined in the 701-710 groups, also present and employed in Georgia.

The budget structure of Georgia has been transferred to the program budgeting system for several years, where funds are allocated according to the spending institutions and their programs / sub-programs. The main Budget Code of Georgia also determines that the basic principle of the program budgeting is to address the state funds to achieve the predetermined results, considering that the program budget is often referred as the results-oriented budget. However, when below **graph 2** is analyzed, where the individual actual expenditures are reflected in the overall costs, we can see that no budget planning and spending prioritization is present. Funds are mainly allocated according to established existing classifiers and there is no uniform vision.

Moreover, the structure of the cost allocation is mainly adjusted to deal with the existing realities and does not involve the development of a long-term goal and strategy. From the **graph 2** is also evident that social protection, economic activity and health care are amongst those who shows only the growing trend, which is also due to short-term persistent problems.



Graph 2: The share of actual individual budget expenditures in the overall costs

Thus, the research's aim is to find optimal econometric model that clearly establishes the state expenditures individual quantitative variables' efficiencies and effectiveness. Outstandingly, the model

will definitely assist and simplify each budgetary expenditure components optimal allocation. More importantly, by identifying each budgetary components true effect it can be applied towards development of the country's healthy economic and competitive environment.

Consequently, research findings ought to be interest to a wide audience, such as: legislative body, state bodies with its structural units, national bank of Georgia, all types of investors and interested citizens of the country.

As a main endogenous variable the analysis uses Georgian Gross Domestic Product. While exogenous variables are consisting Classifications of functions of Government spending (COFOG) grouped by the Ministry of Finance, such as: General public services, Defense, Public order and safety, Economic affairs, Environmental protection, Housing and community amenities, Health, Recreation-culture-religion, Education and Social protection.

Research Philosophy, Methodology and method

The main goal of conducting social research is to study the existing reality and analyze the possible results that are caused by mankind. Despite the fact that nowadays the studies are being undertaken in many directions, all these factors do not change the most important aspects of the studies, associated with discovery and novelty.

It is important that given study implies research philosophy, methodology and method: The research philosophy is based on the "Empirical" philosophical approach. The research methodology involves "Positivism movement" and alongside with "Logical positivism" is based on "Verification principles". In addition, the research in order to handle non-observable and non-measurable theoretical features and to examine relevant theories, envisages "Instrumentalism", particularly the weak form of realism.

As for the research method, research is based on the random variable type and the scalar measurement system, which are typical of quantitative variables. Furthermore, the time series linear multi-regressive analysis is implied as a research design, namely the assumptions of the Ordinary Least Square Method (OLS).

Thus, the OLS will focus on all its distinctive problematic assumptions, namely: the impact of observation, the residuals normal distribution, constant variable (homoscedasticity) and model specification, in order to make the optimal model or best fit.

As noted above, the main goal of the research is to determine the optimal causal association among research variables and testing relevant hypothesis that will additionally check the joint significance of the research variables.

As for the main hypothesis of the research, it is based on the two Tail Test, as in our case all the changes positive or negative are important. Consequently, the main hypotheses of the research is developed as follow:

H0 1 = The state consolidated budget expenditures, by functions of government's including the changes in non- financial assets, jointly have a significant impact on the country's Gross Domestic Product;

Econometric Model

Since the all assumptions, please see **Appendix B**, have been carefully studied. We can firmly state the statistical significance of our econometric model and the model itself is presented as follows:

***GDP** = **- 11.97** * Ln* (*expenditures on General public services) +*
***+ 4.67** * Ln (Defense) -*
*- **92.53** * Ln (Public order and safety) +*
***+ 2.62** * Economic affairs +*
***+ 9.39** * Ln (Environmental protection) -*
*- **0.999** * Ln (Housing and community amenities) -*

- 16.2 ** Ln (Health care)+*
+ 33.23 ** Ln (Recreation-culture-religion) +*
+ 185.4 ** Ln (Education) -*
- 7 .23 ** Ln (Social protection)* ***(Model 1)***

Analyzing research results

Before, we go an in-depth analysis of the processed data, it is necessary to make some clarifications on the variables included in **model 1**. In particular, if you look closely at variables, we see that some variables use the values of natural logarithmic prefixes, while other variable employ ordinary values expressed in million GEL. Specifically, the variables that use ordinary values expressed in million GEL are depending variable GDP and independent variable economic activity. On the other hand, other variables have been transforrmed to a natural logarithm for obtaining optimal (BLUE) regression model.

Thus, an increase in the one unit of a value of an independent variable, represented in millions units, leads to a variation of the dependent variable, with corresponding coefficient of an independent variable. Whereas, one percentage increase in the value of the independent variable, represented in the natural logarithm, causes a variation of the dependent variable, with corresponding coefficient of an independent variable.

The detailed analysis of **model 1** shows that half of the ten involved exogenous variables have a positive effect on GDP growth, and remaining five variables affect negatively. In more detail, the most positively affected independent variable on GDP growth is Education, where one percent increase in educational expenditure, all other things being equal, contributes to an increase of 185 million GEL in GDP growth. The second place is held by the expenses on Recreation-culture-religion, with the positive coefficient of 33 million GEL. The third place is hold by Environmental protection, where one percent increase in Environmental protection expenditure, all other things being equal, leads to an increase of 10 million GEL in GDP growth. Fourth and fifth places are shared by Defense and Economic activity and still all other things being equal, one percent increase on Defense expenditure and one unit (million GEL) rise on Economic affairs cause GDP growth of around 5 and 3 million respectively.

On the other hand, according to analyze of the negative indicators, the first place is held by Public order and security, in where the one percent growth of the expenditure on the Public order and security, all other things being equal , causes shrinkage of the GDP by 93 million GEL. The next position is obtained by the Health care, where all other things being equal, the increase by one percent is likely to be sacrificed by loss of 16 million GEL in GDP growth. The third and fourth place are held by expenditures on General public services and Social protection, where one percentage of their expenditures increase, all other things being equal, causes 11 and 7 million GEL decline of the GDP in that order. The list is concluded by Housing and community amenities, where every one percent increase on that expenditure causes the GDP to shrink by around 1 million GEL, all other things being equal.

It is also important to review the analogies of other foreign countries and analyze their budget expenditures. However, direct implementation of any foreign approaches would not be a beneficial for Georgia, as there is always need for taking into consideration the specific characteristic of the country.

What is more, this is the model that determines long-term priorities and in order to make budgetary planning more effective the budget formation should be orientated on the variables with positive effect. It is clear that in today's reality, when many people greatly depend on Social protection and Health care programs, is difficult to talk about their negative effects, However, if we want to become sustained country, it is necessary to develop a long-term strategy that will ultimately focus on the causes for the elimination of poverty and adversity. Thus, the budget should imply long term planning for achieving predetermined goals and should not be solely orientated on postponing issues due to everyday existence.

Further analysis shows that defense spending has a positive impact on economic growth, while the expenditure on Public order and safety demonstrates a negative effect. In general, it is logical because defense spending, especially if it is orientated on the substitutability of import, acts as a great supporter for development country's stability and productivity, while the stability is an essential attribute for building the sustainable development of any economy. On the other hand, the increase in expenditure on public order and safety has a tendency of additional burden over the economy, especially if duplication of functions occurs.

Moreover, the detailed analysis of the Georgian law regarding state budget of 2018, (Matsne.gove.ge) in where the state budget disbursements and increase in non-financial assets are identified individually according to their functional code, only two classificatory constituent the Defense and Education have research and development component. In more detail, the figures indicated in this law, for the period of 2016-2018 budget allocation, the actual expenses incurred on R&D in both Defense and Education have on average same percentage rate of 4.4%.

Recomendations

Once again, it is worth mentioning that the current study is mainly designed to assist in establishing the long-term strategy of the country development. Thus, any short-term conclusions and practical implementation of it based on the research outcomes, especially when a comprehensive examination and exploration of each constituent expenditure classificatory code is not done, is premature, as most vulnerable layer of society could be affected.

Thus, in order to enhance the effectiveness of future strategic budgetary planning, the research is introducing a number of recommendations:

- ✓ **It is recommended to set long-term strategies during the budget planning process and budget allocations should be prioritized based on Classifications of functions of Government spending (COFOG), which are identified with positive economic effect, namely: Education, Defense, Economic affairs, Recreation-culture-religion and Environmental protection;**

- ✓ **It is recommended, while prioritizing long-term budget planning, to be considered all the Classifications of functions of Government spending (COFOG) which are founded and presented in the negative context of economic development, namely: Public order and safety, Health care, Expenditures on General public services, Social protection and Housing and community amenities;**

- ✓ **It is recommended that according to the Government Financial Statistics (GFS) standards manual, all under 701-710 Classifications of functions of Government spending (COFOG) codes include as a component of spending the Research and Development assessment;**

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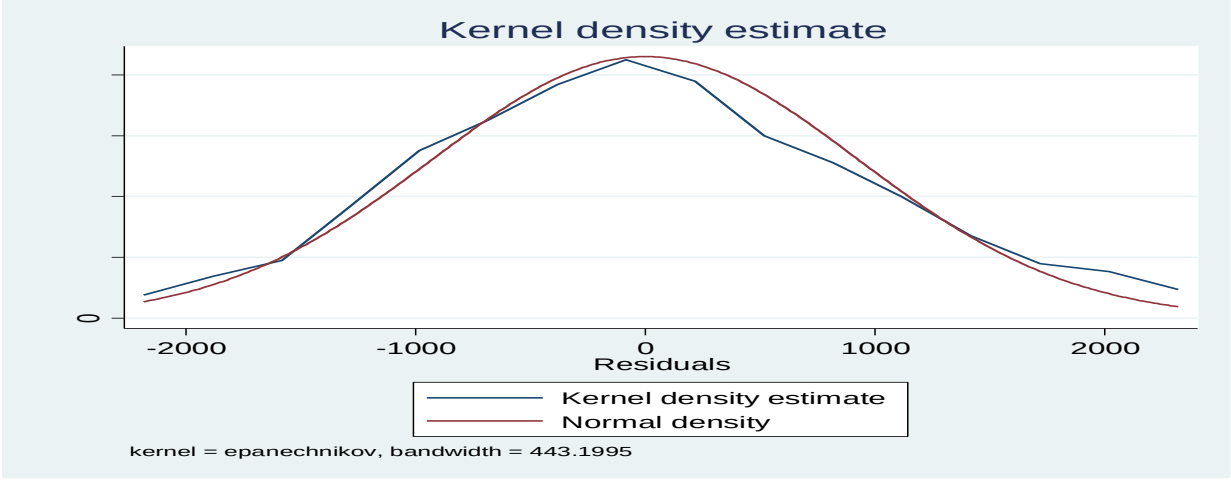
Appendix A

Georgian Budget Expenditures By Functions of Government and Gross Domestic Product (Million GEL) as of 2002-2017 years											
Year	General public services	Defense	Public order and safety	Economic affairs	Environmental protection	Housing and community amenities	Health care	Recreation, culture and religion	Education	Social protection	GDP
2002	392.2	48.804	85.8	59.472	0	56.8	59.751	48.054	150.6	299.7	7456.0
2003	461.1	61.2	113.6	87.1	0	60	29.5	49.7	164.1	342.5	8564.1
2004	480.1	160.4	272.2	179.9	0	140.7	95.4	85.7	286.3	477.9	9824.3
2005	524.1	396	286.6	388.8	0	262.7	204.2	107.6	288.7	627.5	11620.9
2006	680.8	722.2	382.7	474.8	0	448.5	225.8	139.1	413.8	690.1	13789.9
2007	544	1502.9	725.3	974.3	75.4	497.3	256.3	177.2	458.2	640.2	16993.8
2008	1510.1	1552	1010.6	847.7	87.9	534.9	313.1	202.1	553.8	323	19074.9
2009	1744.6	871.7	882.6	1043.6	114.9	349.7	363.8	239.5	579.6	459.8	17986.0
2010	910.6	675.8	865.7	1100.7	124	544.2	454.8	312.2	611.7	1421.4	20743.4
2011	900.7	720.6	880.5	1135.6	110.8	697	398.8	409.6	656.4	1551.8	24344.0
2012	939	717.9	909.4	1543.2	88.5	494.5	416.1	395.6	757.7	1732.3	26167.3
2013	925	636.6	907.3	1262.1	134.2	319.8	524.7	329.2	825.5	1999.2	26847.4
2014	990.8	646.5	955.1	1330.5	162.9	323.1	694	392.6	933	2384.8	29150.5
2015	1086.6	660.9	1010.2	1337.3	133.2	410.6	905.9	573.4	1074	2467.3	31755.6
2016	1173.3	729.2	1010.9	1546.8	143.4	461.6	1046	468.7	1287.9	2654.3	34028.5
2017	1228.3	697.9	1052.3	2071.6	144.6	455.1	1136.3	469.7	1457	2761.8	38042.2

Source: https://mof.ge/biujetebis_xarjebi_fukcioalur_chrilshi და http://www.geostat.ge/?actio=page&p_id=118&lag=geo

Appendix B

Data econometric analysis



Graph 3: Normal distribution of the residuals

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Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of ðð3

         chi2(1)      =     1.31
         Prob > chi2  =   0.2519
```

Homoscedasticity: Test 1

Number of obs	=	16	
F(10, 5)	=	51.74	
Prob > F	=	0.0002	
R-squared	=	0.9904	
Adj R-squared	=	0.9713	
Root MSE	=	1605.3	

Variables joint significance: Test 2

GDP	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
_hat	.8882826	.1358644	6.54	0.000	.5947654	1.1818
_hatsq	2.59e-06	3.09e-06	0.84	0.417	-4.08e-06	9.26e-06
_cons	989.2591	1327.631	0.75	0.469	-1878.914	3857.432

Model specification: Test 3

Ramsey RESET test using powers of the fitted values of GDP
Ho: model has no omitted variables
F(3, 2) = 14.90
Prob > F = 0.0636

Model omitted variables: Test 4