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STATISTICAL ANALYSIS OF THE PUBLIC DEBT SUSTAINABILITY OF GEORGIA

Abstract. Debt sustainability is an important factor of economic growth of the country. The decrease of economic growth rates in Georgia and increased fiscal deficit and public debt (both, foreign and internal) since

2012 year, have made it actual to assess the debt sustainability of the country both, in medium term and long term perspectives. The analysis evidenced that by the 2018 marginal indicators of debt sustainability (Public debt/GDP, Public debt/budget revenue, Public debt/export), are below the thresholds (50%, 300%, 200%). Nevertheless, a shock tests indicate that debt sustainability is vulnerable to permanent long term and to sharp short term shocks. In order to maintain low risk for debt sustainability, The GDP growth rate should be at least 7% in the medium term and the budget deficit should be below 3% of GDP for the same time period.

Keywords: Public finance, Public debt sustainability, Fiscal sustainability.

Introduction

Following the present level of the public debt of Georgia, the work considers the evaluation of the fiscal sustainability of the country and identification and control of the risks influencing the fiscal sustainability as one of the factors determining the macro-economic sustainability of the country.

The fiscal sustainability of the country is estimated by considering the following indicators:

1. Change of the public debt/GDP ratio under the influence of different shocks as per the basic and alternative scenarios. The basic scenario considers medium- and long-term forecasts of the government regarding the macroeconomic indicators (GDP growth, inflation, budgetary deficit and exchange rate). As for alternative scenarios, they give pessimistic (inferior to the basic scenario) or optimistic (better than the basic scenario) forecasts of the same indicators.

2. Public debt structure (in relation to foreign and domestic debt) and its dynamics.

Goal of the study

The paper studies the impact of various factors on fiscal sustainability. In particular, The GDP growth rate shock test, the budget deficit shock test, the exchange rate shock test according the baseline, optimistic and pessimistic scenarios is analyzed.

Results of the study

Debt sustainability implies fiscal policy consistent with macroeconomic stability and growth. In general, fiscal sustainability is characterized by low inflation, low real interest rate, high private sector Investment, high growth rates. In 2013-2017 years our economy was characterized by high inflation, high real interest rate, low grow rate and low investment. These indicators undermine fiscal sustainability of Georgia.

At present, the public debt of Georgia exceeds 4,5 billion US Dollars. Since 2012 year to present, the public debt to GDP ratio increased (from 30 to 45%) and economic growth rate declines. One of the main reasons for that was radical change of fiscal policy. Some initiatives of the new government were directed against the free market economy principle. This hampered investment decisions. The significant increase of social benefits was the main factor of the budget deficits, which is not part of the economic growth oriented policy. Also, decrease of the share of public investment expenditures in the state budget total expenditures had a negative impact on the economic growth rate.

In order to ensure the debt sustainability and economic growth in the long run, it is necessary to change the direction of the debt to GDP trend and reduce the level of this indicator gradually. In addition, it is necessary to reduce this indicator to the level which allows keeping the conditions of creditability and liquidity of the country.

Georgia is often subject to the impacts of external and internal shocks. In the case when the government debt to DGP ratio approaches the admissible upper limits, the situation may be estimated as unsustainable.

In General impact of each variable on the debt to DGP dynamics is different. In particular, a high primary balance results in the reduced government debt to DGP ratio, high initial government debt results in the increased debt to DGP ratio, high real interest rate results in the increased government debt to DGP and high economic growth results in the reduced government debt to DGP ratio.

There is a direct relation between the government debt dynamics and efficient real interest rate; the relation between the national debt dynamics and the real growth rate is indirect, and the relation between the government debt dynamics and the depreciation of the exchange rate is direct. Besides, the contribution of the primary balance to the debt dynamics is with a minus sign, while the contributions of “and other flows” (e.g. incomes from privatization) is with a plus sign.

Fiscal sustainability is capability of the government to maintain its current expenses and tax policy in medium term and long term periods without creation of danger to payment capacity of the government, or without denying its separate types of obligations and separate types of expenses (including pensions and other social expenses, health care, education, and others) considered by the budget.

Public debt is sustainable, when government can continue serving it without requiring an unrealistically (from social and political point of view) large adjustment to its future revenues or expenses.

Public debt can be regarded as sustainable when the primary balance needed to at least stabilize debt under both baseline and realistic shock scenarios is economically feasible, such that the level of debt is consistent with an acceptably low rollover risk and with preserving potential growth at a satisfactory level (IMF, 2013). In practice fiscal sustainability is assessed by checking whether debt is on a declining path while remaining below certain thresholds. Related concepts are solvency- the current debt stock is fully covered by the present discounted value of all expected future primary balances, and liquidity-ability to meet maturing obligations.

Some Economists call fiscal policy unsustainable if a country's debt is growing faster than its GDP) Congressional budget Office, 2007).

In the economic literature we encounter various definitions of fiscal sustainability. According to Balassone and Franco (1) the theory has proposed different conditions for sustainability-from a non rising tax rate to an inter-temporal discounted budget constraint.

Blanchard (2) defines sustainable fiscal policy as a policy that ensures that the ratio of the debt to GDP converges back towards its initial level. , the public debt is sustainable if the inter-temporal constraint is, i.e. the present value of the future primary balances fully covers the initial debt level.

The basic factors influencing the debt to DGP ratio are: primary balance, initial debt rate, real interest rate and rate of the economic growth.

The sensitive analysis of the debt sustainability is based on the baseline scenario of The Ministry of Finance of Georgia and assumptions of a realistic macroeconomic shock test, where one or more economic indicators worsen. The share of external and domestic public debt in overall debt is assumed to be 80%-20% till 2027, the basic real GDP growth rate 5.5%and the basic exchange rate GEL/USD 2.5. The export maintains its current growth tendency.

We used MOF tax revenue projections. Public debt sustainability is examined based on IMF model MAC DSA (3, 4, 5, 6).

The study showed that according the baseline scenario all marginal indicators of debt sustainability in 2017 (Public debt/GDP, Public debt/budget revenue, Public debt/export), were below the thresholds (50%, 300%, 200%). According to this scenario Georgia's fiscal Sustainability is stable in the medium term. The debt burden indicators do not exceed the thresholds. But the calculations show that the degree of impact of different shocks is different. In particular, the government debt to DGP value is most strongly affected by the shocks caused by

the exchange rate depreciation and by the reduced growth rates. In a long term, debt is unsustainable in case of permanent multi shocks.

A shock tests indicate that debt sustainability is vulnerable to permanent long term and to sharp short term shocks

We must also note that in estimating the debt sustainability, the model given above uses the data only about the public debt and does not consider the information about the debts of corporations or legal entities of public law (LEPLs). However, in reality, LEPLs are quasi-national corporations financed through the state budget. Consequently, the consideration of their debts in the national debt statistics will further increase the load of the national debt and will complicate ensuring the sustainability of the public debt.

When estimating the national debt of Georgia, the peculiarity of its structure should be considered. The share of foreign debt in the national debt is more than 80% significantly exceeding the upper limit (60%) fixed by the International Monetary Fund for Market access countries.

The analysis has made it clear that by 2018, such indicators of the public debt sustainability as the public debt to DGP, public debt to the budget Revenues, and public debt to export ratios, according realistic scenario remain below the limits. Nevertheless, shock tests of economic factors indicate that debt sustainability is vulnerable to permanent long term and to sharp short term shocks. Without a timely adjustment of fiscal policy meaning using the budgetary funds to finance predominantly the fields supporting the economic growth, such as education and science, targeted (rather than general) healthcare programs and infrastructural projects, reducing the administration costs and identifying and controlling fiscal risks, the country may face the need for a significant reduction of the budget expenditures in the medium- and long-term periods.

We should take into account, that the public debt statistics only cover the debts of the general government and National bank of Georgia. The total external public debt is 6 billion USD (44% of GDP). But Country's total external debt is 15.5 billion USD (historical maximum level) (more than 100 % of GDP). The share of public debt in the whole foreign debt of Georgia in 2017 year comprises nearly 40%, the rest is the share of the private sector. Assessing fiscal sustainability we should take into account risks, associated with private debt too.

One of the main problems of fiscal sustainability of Georgia in 2013-2017 years was the distribution of the debt burden during the year. The observed tendency was that total deficit was allocated dur-

ing the last months of the year, which causes monetary pressure on exchange rates, price levels and fiscal sustainability.

Therefore, arising from the challenges existing in the budgetary system of Georgia, For achievement of fiscal stability in medium term and long term periods it is vital development and establishment of tax and spending policy oriented on economic growth that at the same time will allow a gradual improvement of poor social condition existing in the country by enhancement of the effectiveness of internal and external resources' usage.

Conclusion

The study showed that according the baseline scenario in the medium term and long term Georgia's debt is sustainable. All debt sustainability indicators do not exceed the marginal values. However, in a long term debt sustainability is vulnerable to permanent multi shocks.

The analysis showed that in the public debt structure the external debt dominates, which causes fiscal sustainability to be more vulnerable to an exchange rate shock. A raised economic growth and decreased budget deficit could make the country's fiscal sustainability more stable and stimulate high long term economic growth. It will diminish the negative influence of the public debt on the economic growth rate.

The significant increase in social benefits is the main source of the budget deficit enlargement, which is not the economic growth oriented fiscal policy. For sustainable economic growth the share of public investment should increase in state budget expenditures and decrease the share of social expenditures.

The study shows that without urgent adjustment in the state budget expenditures, disclosure and management of fiscal risks, the government of Georgia may find it necessary to drastically cut the budgetary expenses in the medium and long term.

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INDUSTRY 4.0 AND ITS IMPACT ON THE INTERNATIONAL TRADE

Summary. *The work first sets out the current "Industry 4.0" debate. Then it considers how the digitalization making flexible international trade and discusses the challenges of paperless international trade. Finally, the policy priorities for governments are reviewed, followed by the new challenges.*

Key words: *Industry 4.0; paperless trade; digitalization.*

Introduction

"Fourth Industrial Revolution" (4IR), or "Industry 4.0" became the topical issue of nowadays among the scientists and policymakers (*Schwab, 2016*). "Industry 4.0 describes the *organization of production processes based on technology and devices autonomously communicating with each other along the value chain*: a model of the 'smart' factory of the future where computer-driven systems monitor physical processes, create a virtual copy of the physical world and make decentralized decisions based on self-organization mechanisms. The concept takes account of the increased digitalization of manufacturing industries where physical objects are seamlessly integrated into the information network, allowing for decentralized production and real-time adaptation in the future" (*Smit et al. 2016*). Consideration of