

Estimation of Government Spending Multipliers for Russian Economy

Topic: 811X IO Analysis for Policy-making (2)

Author: Alexander O. BARANOV

The article examines the impact of growth in public spending in Russia on the dynamics of macroeconomic and sectoral indicators using econometric techniques and dynamic input-output models.

Up to now, an ongoing debate about the effectiveness of public spending as a way to stimulate economic growth. The Keynesian point of view is that the economic multiplier is greater than unity. However, it is known assertion disputed by the new classical school (Barro Robert J., Redlick Charles J. Macroeconomic Effects From Government Purchases and Taxes // The Quarterly Journal of Economics. " 2011. " p. 51-102). Representatives of the new classical school argue that in many cases the economic multiplier is less than one. In their opinion economic growth more effectively stimulated by tax cuts.

System of government spending multipliers in Russia obtained using econometric analysis

1. For the study were allocated 6 main indicators of public spending:

- Nationwide Issues;
- National economy;
- Housing and utilities;
- Environmental protection;
- 'National defense' + 'national security and law enforcement ";
- Social spending, which includes spending on education, social policy, culture, cinema, media, health care, physical culture and sports.

2. Calculations have been performed using data with the annual step (1995-2013) and quarterly step (2004-2014).

Main conclusions on the results of econometric calculations.

As a result of the econometric analysis was not found statistically significant dependence of growth of Russia's GDP from government spending for annual data and quarterly data. Therefore, on the basis of econometric analysis could not determine the multiplier of government spending for GDP of the Russian economy.

Impact of growth of different types public spending on the growth of gross output and VA growth in various economic activities is contradictory. In some cases the results of calculations for quarterly and annual data contradict each other.

Conclusions on the results of calculations using the Dynamic Input-Output Model

1. Multipliers of government spending increase for gross output of the Russian economy in all analyzed items have values greater than one. This confirms the effectiveness of Keynesian ideas to stimulate economic growth by increasing public spending on final goods of construction, machine building (including defense spending), health care, education, research and development. The highest multiplier effect is achieved with an increase in construction costs (the value of the multiplier in 2014 is equal to 2,4), the lowest - at increasing expenditure on research and development (the multiplier in 2014 equal to 1,5). It should be noted here that the expenses on research and development have an impact on economic growth in the long term and the full effect of their increase may occur much later.

2. Negative impact of growth in public spending on production of a number of sectors (construction, machine-building, research and development) on the dynamics of the gross output of the second subdivision is explained by two factors a) the redistribution of resources in favor of industries producing goods and services primarily for production purposes; b) the fact that the increase in production requires a new fixed assets, which are created in industries that produce primarily first division products.

3. It was assumed in this study that public spending increase needs not only increase of production of any industry, but also needs increase of the corresponding inputs of capital assets. Because of this assumption the most significant multiplier effects associated with fixed-assets building industries. Such multiplier effect can be expected in a situation when the economy does not have adequate reserves of production capacity by economic activities, the demand for products of which from the state increases significantly.

4. Type of economic activity, for the purchase of products of which have been directed additional public spending, in addition to the fixed-assets building industries provide the greatest increase in gross output. For example, if the increase in public spending has been directed to education, the gross output of the industry in 2014 increased by 1,427 times, which is the highest value among all other economic activities, except for machine-building.

5. As a result of calculations were determined the multipliers for some major directions of public spending. It is shown that the acceleration of economic growth in the short and medium term most effectively provided through the growth of government spending on construction and machine-building products, including defense products. These economic activities have the highest multipliers throughout the forecast period.

The novelty of the results consists in the comparison multipliers of government spending in the economy of Russia, obtained using econometric methods and dynamic input-output model.