

The effects of the reduction of the social security contributions

The social security contributions paid by firms were massively reduced in January 2016. We show results of a simulation exercise that assesses the effects of this measure on output, private consumption and other key macroeconomic variables. We find that it significantly boosts GDP and consumption while reducing inflation, and that these effects are sizable both in the short-run and in the long-run.

In a second scenario, we assume that such a reform helps to lower the share of the shadow economy. The economic effects are smaller in such a scenario, as it implies that firms' production costs rise. At the same time, fiscal benefits result from such a step.

Background and methodology

In early 2016, as part of the tax code reform, the social security contribution (SSC) rate paid by firms was massively reduced from an average of 44% to 22%. The idea behind this reform was to reduce labour costs, so that firms become more competitive, boosting exports, investment and real wages. A further motivation was to reduce the level of the shadow economy.

What are the economic implications of such a reform? For our analysis, we employ a New Keynesian Dynamic Stochastic Equilibrium Model (DSGE), a mainstream macroeconomic model, which has been specifically tailored for analysing the macroeconomic effects of a reduction in the payroll tax rate. Models of this class are quite good in capturing the short to medium-run dynamics of the most important aggregate variables, but less so for long-run growth dynamics.

Empirical results

The massive reduction in the payroll tax will lead to significant revenue losses (estimated by analysts up to UAH 100 bn, or more than 4% of expected 2016 GDP), which will be only partially compensated by revenue-increasing measures (e.g. the salary cap on which SSC applies was increased). We assume that a resulting revenue shortfall of 3% of GDP is fully offset by a corresponding reduction in government spending to keep the budget deficit unchanged, in order to be compliant with the IMF programme. Regarding the modelling of the behaviour of the central bank, we assume it aims at both inflation and exchange-rate stability.

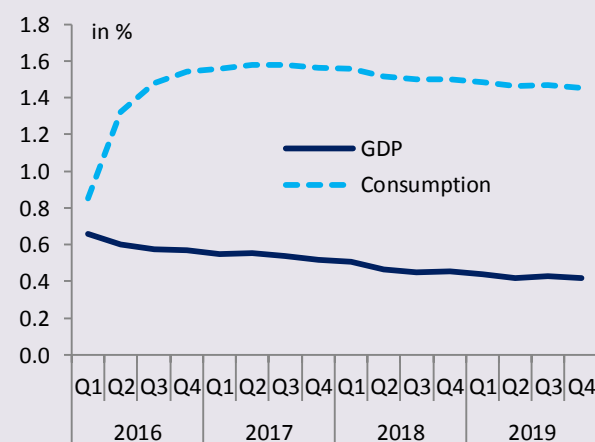
The cut in the SSC rate reduces the costs of production, leading to a fall in prices. Lower inflation allows the central bank to reduce the interest rate and also leads to higher real wages. As a result of this, private consumption increases. The trade balance improves

because of an expenditure-switching away from foreign goods towards Ukrainian goods, caused by the firms' improved price competitiveness. Because of the reaction of consumption and the trade balance, GDP increases.

The (permanent) reduction in government spending required to offset the revenue shortfall from the SSC rate reduction is 2.1% of GDP. This is lower than the reduction in SSC revenues because of a compensating increase in other revenue due to higher GDP. The cuts in spending lead to lower prices and a reduction in GDP due to lower aggregate demand. Thus, two shocks have reinforcing effects on prices and opposite effects on the GDP. Our numerical simulation demonstrates that the positive effect on GDP dominates.

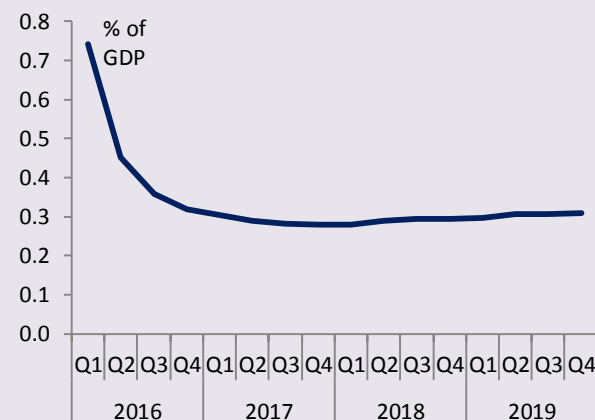
The following figures show the dynamics of the main variables of interest for 16 quarters after the "shock".

Additional growth in GDP and consumption



Source: own calculations

Improvement of the trade balance



Source: own calculations

The quantitative effects resulting from this shock are as follows: Private consumption rises by 0.8% in the short term and by 1.5% in the medium term. The trade balance (relative to GDP) improves by 0.7% immediately and by 0.3% in the medium term. GDP increases immediately by 0.7%; after several years it is still up by 0.4%.

What about de-shadowing?

A peculiarity of Ukraine's economy is the high share of the shadow economy. Data by the Ministry of Economic Development and Trade suggest that more than 40% of GDP is created using shadow schemes. We tried to simulate the impact of a possible reduction in the shadow economy due to a fall in the SSC rate in a second scenario. Here, we assume that 25% of the net wage bill is paid "in the shadow", and after the reduction of the SSC rate this drops to 21%. While a possible de-shadowing would likely be a very gradual process, our model cannot capture its precise path.

In this "de-shadowing" scenario, whose results are not shown here, all effects are smaller. The intuition behind this is that for those firms that are coming out of the "shadow", production costs are actually increasing and thus the net effect on prices and competitiveness is smaller. Furthermore, the deflationary pressure is smaller because the government spending cuts required for budget neutrality are smaller (1.2% of GDP instead of 2.1% of GDP in the first scenario) when a smaller tax cut needs to be offset. This further implies that the expenditure switching effect away from foreign and towards domestic goods is smaller and the central bank reacts less expansionary so that the private spending increase is smaller. However, this observation should not be understood as an argument against efforts to de-shadow the economy. On the contrary, more official employment and the associated taxes are crucially important for Ukraine's fiscal sustainability. The benefits thereof are simply not captured well by our model.

Summary

The results of our analysis, which should not be confused with a forecast, show that there are a number of likely economic benefits associated with the recent cut in the SSC rate. While the model cannot capture all specifics of Ukraine's economy in full detail, it generally lends support to a reform that targets the high burden of labour taxation in Ukraine.

Furthermore, the model could be used in the discussion of different tax (and spending) policies and their corresponding impact on Ukraine's economy. This would increase impartiality of discussions on this often hotly debated topic among policy circles, academia and the civil society.

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Note: A more comprehensive analysis of the topic is provided by the Policy Briefing PB/09/2016 "Economic impact of the recent decrease in social security contributions – A model based analysis".

Available at: www.beratergruppe-ukraine.de

A shorter version can be found on www.voxukraine.org

German Advisory Group

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