



Eurasian
Development Bank

Macroeconomic model for analysis and forecasting of the Uzbekistan economy

Working paper 25/6

Almaty — 2025



Vinokurov, E., Kuznetsov, A., Sobolevskaya, M., Berdigulova, A. (2025) *A model for macroeconomic analysis and forecasting of the Uzbekistan economy*. Working Paper 25/6. Almaty: Eurasian Development Bank.

Annotation

This report presents the results of the development of a model for macroeconomic analysis and forecasting of the Uzbekistan economy, created to be integrated into the general system of macroeconomic forecasting and analysis of economic processes in the EDB member countries. More detailed information on the integrated system of models (ISM) is presented in the joint report of the Eurasian Development Bank and the Eurasian Economic Commission ([EDB, 2016](#)).

Structure of the report: a description of the integration of Uzbekistan's model into the model complex used by the EDB. The specific economic features of Uzbekistan taken into account in the model are presented. The structure of the model and calibration of parameters are explained. Methodological aspects, analysis of sensitivity of the model to various macroeconomic shocks and its predictive ability are considered. The appendices detail the statistical data with an indication of sources and provide a system of equations.

Keywords: macroeconomic modelling, forecasting, GDP, inflation, exchange rate, demand, monetary policy, budget, transmission mechanism, macroeconomic shocks.

JEL: C68, E27, E32, E52, E58, F37, F41.

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SUMMARY

This report presents the results of developing a model, which as part of the ISM allows the analysing and forecasting of Uzbekistan's economic development on a medium-term horizon, as well as the assessment of the impact of various domestic and external shocks on the country's economy. Above all, this project is focused on the Eurasian Development Bank's objectives involving macroeconomic analysis and forecasting of the economies of the Bank's member countries, taking into account cross-country effects.

Although this project does not aim to analyse and address Uzbekistan's structural problems, focusing more on aggregate macroeconomic indicators, it provides an opportunity to quantitatively analyse various economic policy scenarios, including Uzbekistan's cooperation with countries in the EDB region. In addition, the developed model approach helps to assess the level of synchronisation of business cycles of the Bank's member countries and the processes of economic convergence. The presented model also allows the assessment of the risks to macroeconomic stability of Uzbekistan, taking into account the specifics of budgetary and monetary policy implementation.

In general, the model of the Uzbek economy is similar to other ISM models and includes blocks for aggregate demand, aggregate supply, the fiscal sector, monetary policy, and the labour market. A separate area is the remittances sector, taking into account its impact on the country's economic performance (the same approach was used for the economies of Armenia, Tajikistan and Kyrgyzstan). The parameters of the model were calibrated in such a way as to take into account stylised facts about the Uzbek economy, monetary and exchange rate policy regimes, as well as the functioning of the transmission mechanism.

In preparing the modelling framework, we conducted a retrospective analysis with an assessment of the current state of the economy and identified key drivers of macro variables, taking into account the specifics of Uzbekistan's monetary and fiscal policy. Structural changes in Uzbekistan's economy since 2017, when the country embarked on a liberalisation course, were taken into account during the filtering process.