

ASKAR MUKASHOV

ECONOMIST | Quantitative Modeling | Applied Economic Analysis

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PROFILE

Economist and quantitative modeler with more than 10 years of experience in applied research and central banking. Develops and applies structural economic models to macroeconomic, trade, investment, fiscal, and distributional questions. Methods include computable general equilibrium (CGE) and dynamic stochastic general equilibrium (DSGE) modeling, Monte Carlo simulation, econometrics, machine learning, and portfolio analysis.

PROFESSIONAL EXPERIENCE

International Food Policy Research Institute (IFPRI) - Washington, DC

Research Fellow, Foresight and Policy Modeling 2025-present

- Develop and apply national and global structural models to study trade, macroeconomic shocks, structural change, and distributional effects.
- Lead RIAPA-AI as principal investigator. The project links a natural-language interface to IFPRI's Rural Investment and Policy Analysis (RIAPA) computable general equilibrium model.
- Lead research on economywide risk using CGE models, historical shock distributions, Monte Carlo simulation, household welfare modules, and machine learning. Current work extends the method to a global model with bilateral trade.

Associate Research Fellow, Foresight and Policy Modeling 2022-2024

- Built and applied country-level structural models for policy scenarios and economic shocks in 11 countries across Africa, Asia, and the Pacific.
- Developed a standardized risk-profiling framework and produced peer-reviewed articles, country assessments, and reproducible simulation workflows.

Kiel Institute for the World Economy - Kiel, Germany

Postdoctoral Researcher 2021-2022

Junior Researcher 2017-2021

- Developed a regional CGE model of Senegal to study structural transformation, regional income disparities, economic geography, and internal migration.
- Applied CGE models to energy-subsidy reform in Egypt and to conflict and reconstruction in Yemen, covering fiscal effects, compensation policies, and reconstruction priorities.

Central Bank of the Kyrgyz Republic - Bishkek, Kyrgyz Republic

Economist, Economic Department 2013-2014

- Developed components of the National Forecasting and Policy Analysis System for inflation targeting, including a DSGE macroeconomic model, and coordinated Monetary Policy Meetings.

Economist, Financial Risk Management Department 2012-2013

- Developed strategic asset-allocation options for international reserves using Black-Litterman and Markowitz models, presented them to the Board, and monitored portfolio, market, and country risk.

EDUCATION

Ph.D. in Quantitative Economics, magna cum laude - University of Kiel, Germany 2021

M.Sc. in Quantitative Economics - University of Kiel, Germany 2016

Economist-Mathematician Diploma, with honors - Kyrgyz-Russian Slavic University, Bishkek 2012

SELECTED HONORS & AWARDS

- Presidential Scholarship of the Kyrgyz Republic (2007-2012), awarded for achieving the highest score nationwide on the 2007 university entrance examination.
- German Academic Exchange Service (DAAD) scholarship (2014-2016); Oluf-Rieke Foundation Fellowship, University of Kiel (2016-2017).
- “Best Young Specialist” Award, Central Bank of the Kyrgyz Republic (2012); commendation from the Deputy Governor for implementing the National Forecasting and Policy Analysis System (2013).

METHODS & TECHNICAL SKILLS

Economic modeling: Computable general equilibrium models; dynamic stochastic general equilibrium models; global bilateral trade and country models; household microsimulation; structural scenario analysis.

Quantitative methods: Monte Carlo simulation; econometrics; machine learning and random forests; Bayesian model averaging and metamodeling; time-series, panel, and cross-sectional methods; portfolio optimization.

Programming & modeling systems: General Algebraic Modeling System (GAMS) and GAMS Engine; Python; R; MATLAB; Stata; EViews; Git; cloud-based model execution and application programming interfaces.

Data & research platforms: Global Trade Analysis Project (GTAP) databases; Bloomberg; Refinitiv Eikon; LaTeX; reproducible model and reporting pipelines.

Languages: Russian and Kyrgyz (native); English (C2); German (B1).

SELECTED RESEARCH PUBLICATIONS

Peer-reviewed journal articles

- Mukashov, A.; Robinson, S.; Arndt, C.; Thurlow, J.; Thomas, T.S. (2026). “Systematic risk profiling: Assessing compounding economic risks in developing countries.” *Economic Modelling* 157: 107511.
- Mukashov, A.; Thurlow, J. (2025). “Regional development and internal migration aspects of structural transformation: A case study of Senegal.” *Economic Systems*: 101328.
- Mukashov, A.; Thomas, T.; Thurlow, J. (2024). “Revisiting development strategy under climate uncertainty: Case study of Malawi.” *Climatic Change* 177: 91.
- Mukashov, A. (2023). “Parameter uncertainty in policy planning models: Using portfolio management methods to choose optimal policies under world market volatility.” *Economic Analysis and Policy* 77.
- Ziesmer, J.; Jin, D.; Mukashov, A.; Henning, C. (2023). “Integrating fundamental model uncertainty in policy analysis: A Bayesian averaging approach combining CGE models with metamodeling techniques.” *Socio-Economic Planning Sciences* 87(B).
- Mukashov, A.; Breisinger, C.; Engelke, W.; Wiebelt, M. (2022). “Modeling conflict impact and postconflict reconstruction: The case of Yemen.” *Economic Systems* 46.
- Breisinger, C.; Mukashov, A.; Raouf, M.; Wiebelt, M. (2019). “Energy subsidy reform for growth and equity in Egypt: The approach matters.” *Energy Policy* 129.

Selected working and conference papers

- Mukashov, A.; Kim, S.; Fang, P.; Diao, X.; Thurlow, J.; Proctor, J.; Rennison, A. (2026). “An agentic AI assistant for country-level economic modeling: Methods, data, and expert evaluation.” *IFPRI Discussion Paper* 2424.
- Mukashov, A.; Thierfelder, K.; Robinson, S.; Thurlow, J. (2026). “Key agricultural supply risks for global poverty and undernourishment: A systematic risk profiling approach.” *29th Annual Conference on Global Economic Analysis, Kyoto*.
- **Economywide Risk Assessment series (2024-2025).** Lead/co-author of 11 standardized country assessments across Africa, Asia, and the Pacific.