

# Economic Impact Assessment (EIA) of Structural Reforms in Kosovo

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Ministry of Finance

Kosovo

# Content:

- Current forecasting tool(s) used in the department and the need for an alternative approach
- Brief overview of the CGE (newly adopted)
- Economic Impact Assessment of Four Structural Reforms Measures:
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  - (iii) Reducing Energy Consumption through Energy Efficiency Measures;
  - (iv) Increased employment due to targeted training of unemployed;
- Concluding Remarks: pros and cons of using CGE in our division

# Main model used in MoF Kosovo

- The Kosovo Macro-Fiscal Projection Model (KMPPM) was developed in 2006;
- It is a broadly Keynesian model insofar as GDP is determined by demand, which depends in turn on how much money is 'injected' into the economy through exports, government spending and the diaspora, how these injections are multiplied by households' propensity to spend, and how much 'leaks' into taxes and imports.
- Private consumption and private investment are forecast with simple behavioral equations, while many other variables are simply forecast to grow at historical average rates. Government consumption and investment are set in line with government plans. Many of the variables are linked by accounting identities.
- Main task of the Macroeconomic Policy Division is to project the path of tax revenues over a three-year horizon and to assess the impact of different policies/ shocks on performance of revenues and other fiscal indicators.

# Why the need for an alternate methodology?

- Estimating the EIA of Structural Reforms is a requirement by the European Commission when preparing the Economic Reform Program (since last year);
- Prior to such requirement, Ministry of Finance was conducting solely the costing of the structural reform measures and ensuring that all the ERP SR measures were budgeted;
- The current tool (KMPM) could not allow conducting the economic impact assessment of the structural reforms;
- Therefore, TA was provided by the EU office with the aim of developing new tool which would allow such assessment;

# Brief Overview of CGE model

- The CGE model has a specific level of aggregation in all sectors of the Kosovo economy (including 20 productive sectors). In a nutshell, the model is a numerical specification of the demand and production relationships the interrelationships between them, and is solved simultaneously for prices in all markets;
- The Kosovo government's revenue systems have been given specific consideration. The government collects direct taxes on factor incomes as well as shares of capital rents from SOE. The government also collects indirect taxes on domestic intermediate and final consumption expenditures and imports. Finally, the government receives fees and fines from households. The Government's consumption expenditure, investment, and transfers are given exogenously;
- The relationship with rest of the world is given by imports and exports of each commodity as well as any net-incomes and exogenous transfers to the government and/or households. The nominal effective exchange rate is fixed, with the real exchange rate moving to equilibrate the external current account balance;

# Brief Overview of CGE model

- Construction of the a Multisectoral (CGE) model consists of two distinct steps:
  - First**, the assembly of a consistent database linking commodity demand and supply, factor incomes, transfers and expenditures, and savings and investment is assembled in one unifying framework, the **Social Accounting Matrix (SAM)**.
  - Second**, the theoretical specification (based on advanced microeconomic optimization principles) of model, programming in the computer model language GAMS, and parameterization of the model by linking the GAMS code to the SAM is done;
- The CGE model has been calibrated so as to generate fiscal and macroeconomic outcomes for 2017-2022 broadly in line with actuals/MoF macroeconomic model (KMPPM) projections;
- The effects of the SR measures on the economy and on main budget indicators are considered as upside development potentials (*optimistic scenario*);

# SR Measure 1: Establishment and functioning of the Commercial Court – **Reduction in Capital Risk Premiums**

- This first scenario assumes that the risk premium in the Kosovo economy is reduced by 5% over the baseline scenario.
  - We expect this measure to impact the real, fiscal and energy sectors in different ways
- **The cumulative medium-term effects of a reduction in risk premiums on GDP growth is 2.1% from 2019 to 2022**
  - Accelerated capital accumulation and lower capital rental rates benefits capital intensive sectors and leads to reductions in the relative prices for capital intensive goods. With no labor supply response, labor wages will continue to rise rapidly.
- **Higher capital accumulation benefits capital intensive** - value added in capital intensive sectors grows relatively more than other sectors which are more labor intensive – in particular, we expect to see a sharp decline in Hotels and Restaurants sector. This sector has is very significant for the service export and has more limited scope for increasing output prices, than sectors more targeted towards the domestic market.
- **Higher capital accumulation results in higher consumption and welfare for all, but with increased inequality.** Higher capital incomes due to accumulation will benefit the existing owners of capital and higher saving rates more than those households depending more on labour incomes.

## SR Measure 2: Reducing the Informal Economy - **Increase in direct tax revenues**

- An increase in direct tax revenues is assumed as a result of increased inspection efforts.
  - More specifically, the scenario assumes a gradual increase in effective direct tax rates over the 2021-2023 from 7.9% to 10% on all labour incomes (PIT) and from 3.2% to 5% on capital incomes (CIT and Real Estate taxes).
- The simulations for this scenario indicate that a revenue-based adjustment in Kosovo could lead to an increase in GDP growth.
  - real GDP growth increases by a cumulative amount of 0.2 % between 2020 and 2023
  - driven by higher government savings (+1.8 %)
  - investment (+9%).
  - This result is intuitive, as the increase of taxes shifts private income and consumption to government savings
- The government's operational budget surplus improves, reflecting higher tax revenues and a reduction in government consumption
- Higher capital accumulation benefits relatively more sectors that are capital intensive, leading to lower relative prices for capital and higher wages
- Increasing direct tax rates and increased government savings have positive distributional implication.



## SR Measure 3: Reducing Energy Consumption through Energy Efficiency Measures – **Reduction in energy losses and subsidy requirements**

- The analysis simulates an elimination of energy subsidies from the current level of 3.5 % of GDP through effective tariff adjustment
- Elimination of energy subsidies in Kosovo will raise GDP growth in market prices by 0.2%
- Higher government savings from lowering subsidies is slightly offset by an increase in government nominal consumption.
- Analysis of the impact of real value added by sector shows that mining, manufacturing and construction benefit from higher investment activity
- The higher energy prices are hurting the lower income households more than higher income households

## **SR Measure 4: Increased employment due to targeted training of unemployed.**

- In the fourth scenario explores the impact of increasing labour employment for Household deciles 1-5 by 1.5% pa.
- Real GDP is expanding by 0.4% over the baseline
- With increased employment, most sectors will expand, with the most labour-intensive sectors expanding most over the baseline
- The targeted employment effort leads to higher incomes and consumption growth for the lower deciles over the baseline

## Concluding Remarks

- The CGE approach allows us to have a better view on the impact of SR on the economy and the budget items – however applying such approach is constrained to:
  - human resources capacities (high staff turnover);
  - data limitations (in the construction of the disaggregated SAM for Kosovo the IO coefficients from Albania were used);
  - not well understood by the public and the policy makers;
  - Simpler models or approaches are more useful sometimes;

# Annex

	Impact, Change from Baseline			
	Impact (Commercial Court)	Impact (Informal Economy)	Impact (Energy Efficiency)	Impact (Increased Employment)
Decile 1	2.7%	-1.4%	-3.0%	0.1%
Decile 2	1.4%	-0.6%	-3.4%	0.5%
Decile 3	1.9%	-0.8%	-3.0%	0.8%
Decile 4	1.2%	-1.1%	-3.5%	0.7%
Decile 5	1.8%	-1.2%	-3.3%	0.8%
Decile 6	1.8%	-1.5%	-3.7%	0.9%
Decile 7	2.5%	-1.4%	-3.2%	-0.3%
Decile 8	2.8%	-1.5%	-3.0%	-0.4%
Decile 9	3.3%	-1.4%	-3.1%	-0.2%
Decile 10	3.2%	-1.4%	-3.1%	-0.1%
Gini	<b>1.0%</b>	<b>-0.3%</b>	<b>0.4%</b>	<b>-0.5%</b>