



Macromodel of the Romanian Market Economy***

Abstract

The macromodel estimates the short and medium-term economic implications for internal policies and changes in the international context. This version of the Romanian macromodel incorporates the experience accumulated through the utilisation of its previous forms - either experimental (tested during 1991-1995) or operational (developed during 1996-2003). At the same time, it introduces some methodological and information improvements. The most significant of them is the structural decomposition of the economy, associated with input-output techniques. Due to the relatively advanced stage of the transitional processes in Romania, the behavioural functions were accommodated - as much as possible - to the standard relationships. Unlike the versions that used the statistical series beginning in 1980, the present one is based exclusively on information concerning the period 1989-2004. Therefore, we have considered more adequately to name this variant the macromodel of the Romanian market (not transition, as before) economy. In this article we present three scenarios for 2009.

Key-words: model, input-output analysis, econometric relationships, simulations JEL Classification: C5, E2-E6, H6

PHARE Programme RO2003/005-551.02.03 "Strengthening the capacity for analysis, macroeconomic forecast and elaboration of economic policies within the National Commission for Prognosis, the Ministry of Economy and Trade and the Prime Minister's Cabinet" - Romanian Center for Economic Policies.

^{**} This is a continuation of the forecasts published so far in Romanian Journal of Economic Forecasting. The team working on these forecasts consists of specialists from the Institute for Economic Forecasting. the National Commission for Forecasting and the Centre for Macroeconomic Modelling: Cornelia Scutaru, Ion Ghizdeanu, Lucian-Liviu Albu, Bianca Pauna, Corina Saman etc.

^{***} Source: Emilian Dobrescu: "Macromodels of the Romanian Market Economy", Editura Economică, Bucharest, 2006.

Scenarios for 2009

For a short description of the model, see RJEF, No. 1/2007 (Păuna, B. et al., 2007).

The computation hypothesis

The methodological changes introduced in the last forecasting estimations were maintained. Three scenarios have been computed for 2009.

- 1. Some hypotheses are common:
 - Thus, a slower growth of nominal revenues is taken into account.
 - The predictions are conceived under a severe austerity of public expenditures.
 - The equation for imports is multiplied by a correction coefficient (0.9), given the present difficulties in accessing external financial resources.
 - According to international projections, the main indicators for the global economic environment deteriorate: IWTc=0.979 and WTDsdr=0.955.
 - Capital inflows (FDPIE and NOCAE) diminish; EU structural funds are considered at 2 bill. Euro.
 - The broad money (M2) increases by 10% as compared to the previous year.
 - The same general consolidate budget coefficients are used.
 - The demographic indicators and the depreciation rate of tangible fixed assets (0.075) are also common.
- 2. The first scenario (A) is based on ${\rm IY_D}^{\rm exp}$ (index of expected disposable income) of 1.09. The equation of total factor productivity (ITFP) is multiplied by a corrective coefficient of 0.925, taking into account the worsening of capital utilization rate (in industry, construction, tourism, etc.) due to the compression of demand, and a possible reduction in output index in agriculture after the exceptional results obtained in 2008.

The results of the simulations are presented in Table 1.

Table 1 Scenario A for 2009

Indicators	Symbol	Dobrescu Macromodel
GDP, current prices, bill. RON	GDP	574.073
GDP index, current prices	IGDP	1,119
GDP index, constant prices	IGDPc	0,972
Household consumption index, constant prices	ICHc	0,993
Gross fixed capital formation index, constant prices	IGFCFc	0,9997

The "Dobrescu" Macromodel of the Romanian Market Economy

Indicators	Symbol	Dobrescu Macromodel
Export of goods and services, bill. EUR	XGSE	40,389
Import of goods and services, bill. EUR	MGSE	52,789
The deficit of the trade balance (% of GDP)	rNX	-0,096
Labour force, mill. pers.	LF	9,945
Employment, mill. pers.	Е	9,262
Unemployment rate	ru	0,068
GDP deflator	PGDP	1,151
Consumption price index	CPI	1,091
Exchange rate, RON/EUR	ERE	4,470
The general consolidated budget deficit (% of GDP).	cbb	-0,025

^{3.} In the next scenario (B), IY_D^{exp} is equal to 1.1, and the corrective coefficient of ITFP slightly ameliorates (0.95).

The results of thr simulations are presented in Table 2.

Scenario B for 2009

Table 2

Indicators	Symbol	Dobrescu Macromodel
GDP, current prices, bill. RON	GDP	579,080
GDP index, current prices	IGDP	1,128
GDP index, constant prices	IGDPc	1,005
Household consumption index, constant prices	ICHc	1,028
Gross fixed capital formation index, constant prices	IGFCFc	1,031
Export of goods and services, bill. EUR	XGSE	41,341
Import of goods and services, bill. EUR	MGSE	55,749
The deficit of the trade balance (% of GDP)	rNX	-0,107
Labour force, mill. pers.	LF	9,945
Employment, mill. pers.	Е	9,296
Unemployment rate	ru	0,065
GDP deflator	PGDP	1,123
Consumption price index	CPI	1,064
Exchange rate, RON/EUR	ERE	4,323
The general consolidated budget deficit (% of GDP).	cbb	-0,026

^{4.} The last scenario (C) is built on premises that IY_D^{exp} =1.11 and the corrective coefficient of ITFP raises to 0.965.

The results of the simulations are presented in Table 3.

Scenario C for 2009

Table 3

Indicators	Symbol	Dobrescu Macromodel
GDP, current prices, bill. RON	GDP	584.185
GDP index, current prices	IGDP	1,138
GDP index, constant prices	IGDPc	1,025
Household consumption index, constant prices	ICHc	1,049
Gross fixed capital formation index, constant prices	IGFCFc	1,050
Export of goods and services, bill. EUR	XGSE	41,915
Import of goods and services, bill. EUR	MGSE	57,597
The deficit of the trade balance (% of GDP)	rNX	-0,114
Labour force, mill. pers.	LF	9,945
Employment, mill. pers.	Е	9,324
Unemployment rate	ru	0,062
GDP deflator	PGDP	1,110
Consumption price index	CPI	1,052
Exchange rate, RON/EUR	ERE	4,248
The general consolidated budget deficit (% of GDP).	cbb	-0,026

Therefore, the first scenario represents a moderate recession of the real GDP with the least external commercial deficit, and the second one corresponds practically to a stagnant evolution; a slow economic growth characterizes the third scenario, associated with the highest commercial deficit. The inflation registers a converse trajectory (in comparison with real GDP) due to variation in output under relatively close dynamics of expected disposable income (IY_D^{exp}).

■Bibliography

Dobrescu Emilian, "Macromodel of the Romanian Market Economy (Version 2005)",
PHARE Programme RO2003/005-551.02.03 "Strengthening the
capacity for analysis, macroeconomic forecast and elaboration of
economic policies within the National Commission for Prognosis, the
Ministry of Economy and Trade and the Prime Minister's Cabinet" –
Romanian Center for Economic Policies,
http://www.cnp.ro/SiteNCP.pdf

Dobrescu, Emilian, (2006), "Integration of Macroeconomic Behavioural Relationships and the Input-Output Block (Romanian Modelling Experience)", Paper presented at the International Conference on Policy Modelling (Ecomod 2006), Hong Kong, June 28-30, http://www.ecomod.org/files/papers/1564.pdf.

- Dobrescu, Emilian, (2006), "Macromodels of the Romanian Market Economy", Bucharest: Editura Economică, 326 pgs.
- Păuna, B., Ghizdeanu, I., Scutaru, C., Fomin, P. and Sâman, C. (2007), "The « Dobrescu Macromodel » of the Romanian Market Economy 2005 version Yearly forecast, basic scenario", *Romanian Journal of Economic Forecasting*, 8(1): 115-125.
- Păuna, B., Ghizdeanu, I., Scutaru, C., Fomin, P. and Sâman, C. (2008) "The « Dobrescu Macromodel » of the Romanian Market Economy 2005 version Yearly forecast, Preliminate for 2008", *Romanian Journal of Economic Forecasting*, 9(4): 206-209.
- Dobrescu, Emilian, (2008), "A desirable Scenario for the Romanian Economy during 2008-2013. Some considerations Concerning the Global Economic Context" *Romanian Journal of Economic Forecasting*, 9(4): 15-58.

Institute for Economic Forecasting - Romanian Academy, Bucharest