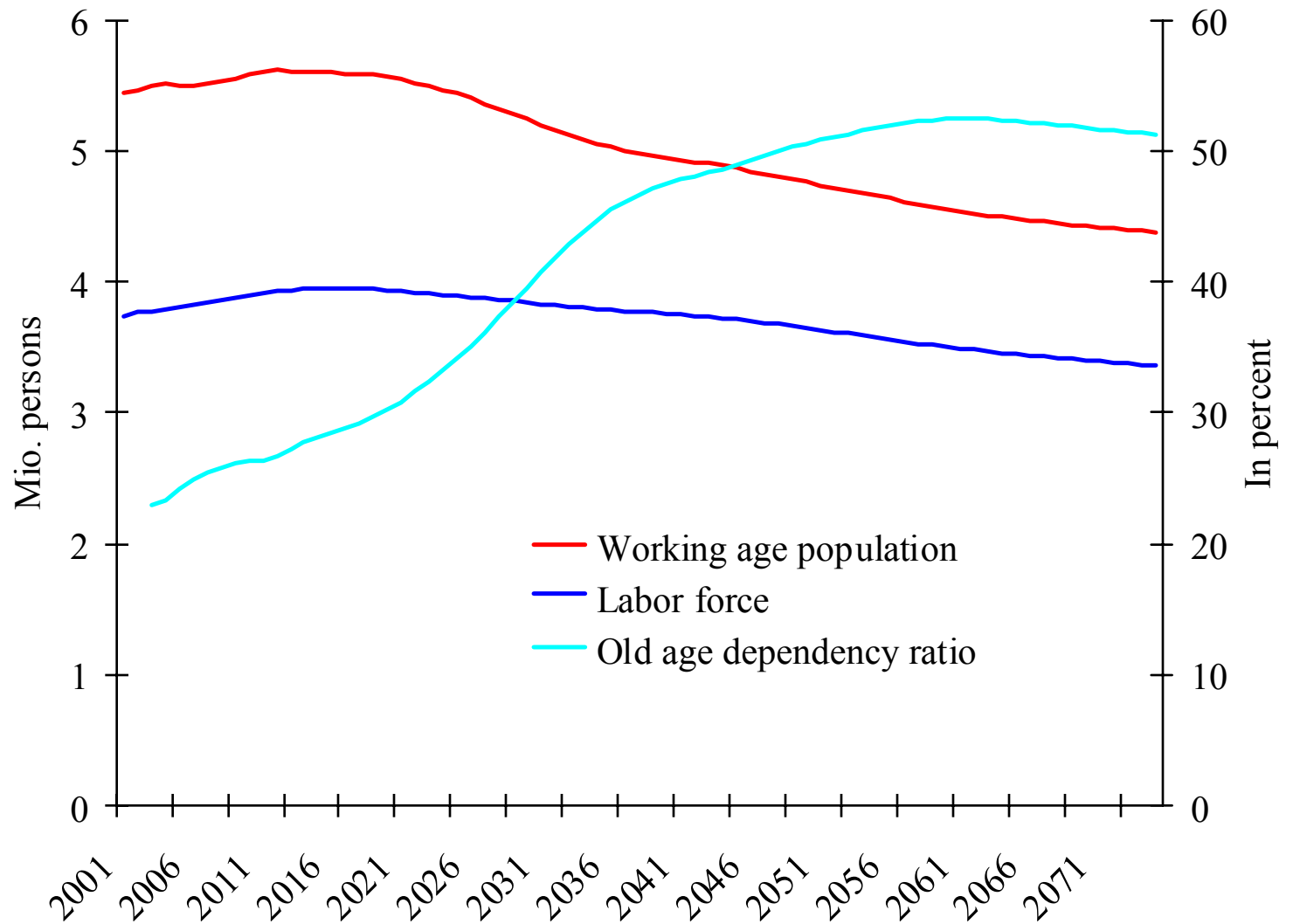


A-LMM

Long-run macroeconomic model of Austria

**Thomas Url
Ulrich Schuh**

Demographic trends





Scope and Aims

- Scenarios until 2075 based on demographic projections by ST.AT
- Neoclassical Growth Model – Stylized Facts
- Small Open Economy

Applications: Simulating Effects of

- Ageing on Labor Market
- Ageing and Reforms on the solvency of social security system
- Labor Market Participation



Forward-Looking Firms

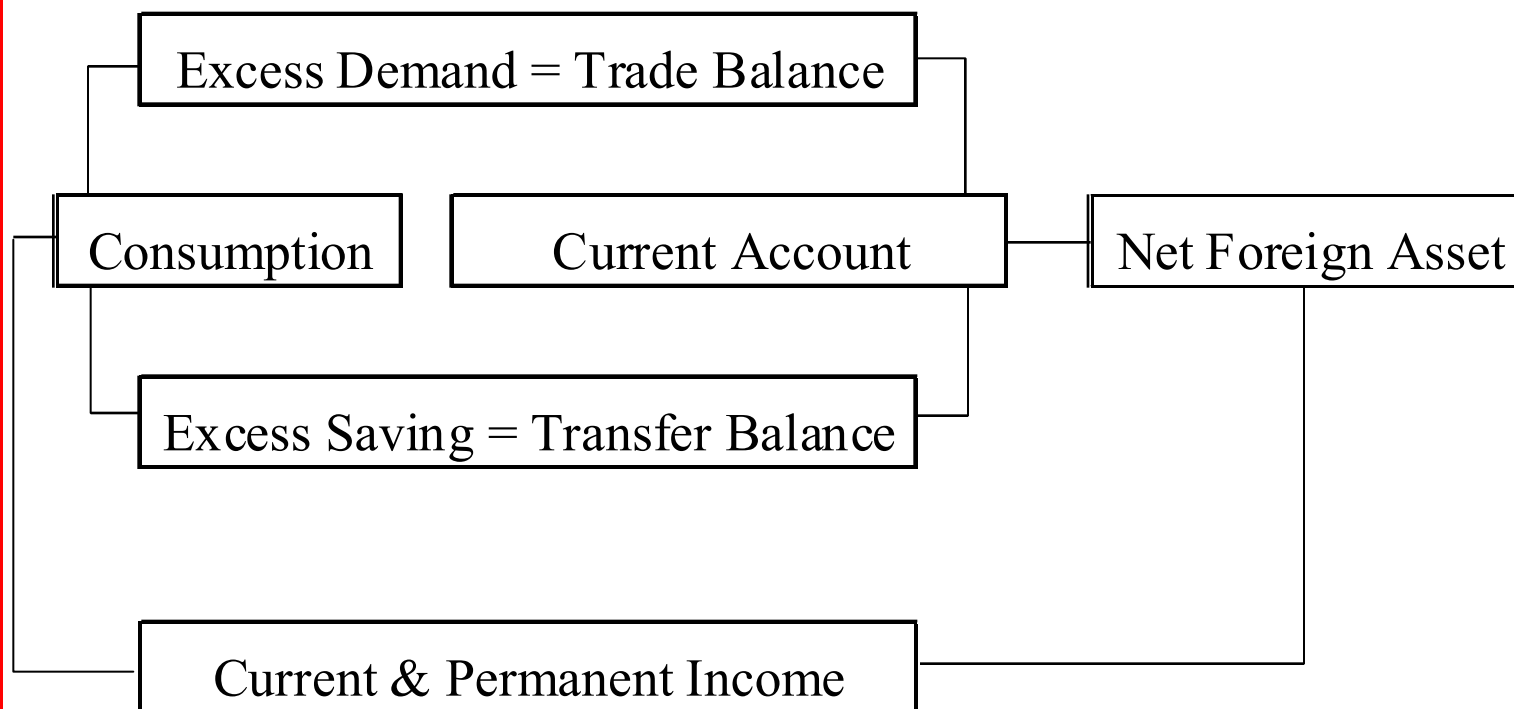
- Cobb-Douglas production function with capital, labor and an exogenous technical progress
- Homogenous factor inputs and output
- Tobin's Q with adjustment costs and direct taxes
- Perfect foresight



Forward-Looking Households

- Perpetual-youth Model
- Permanent Income Hypothesis
 - human capital
 - financial capital
- Liquidity Constraints
 - disposable income

Closure of the model





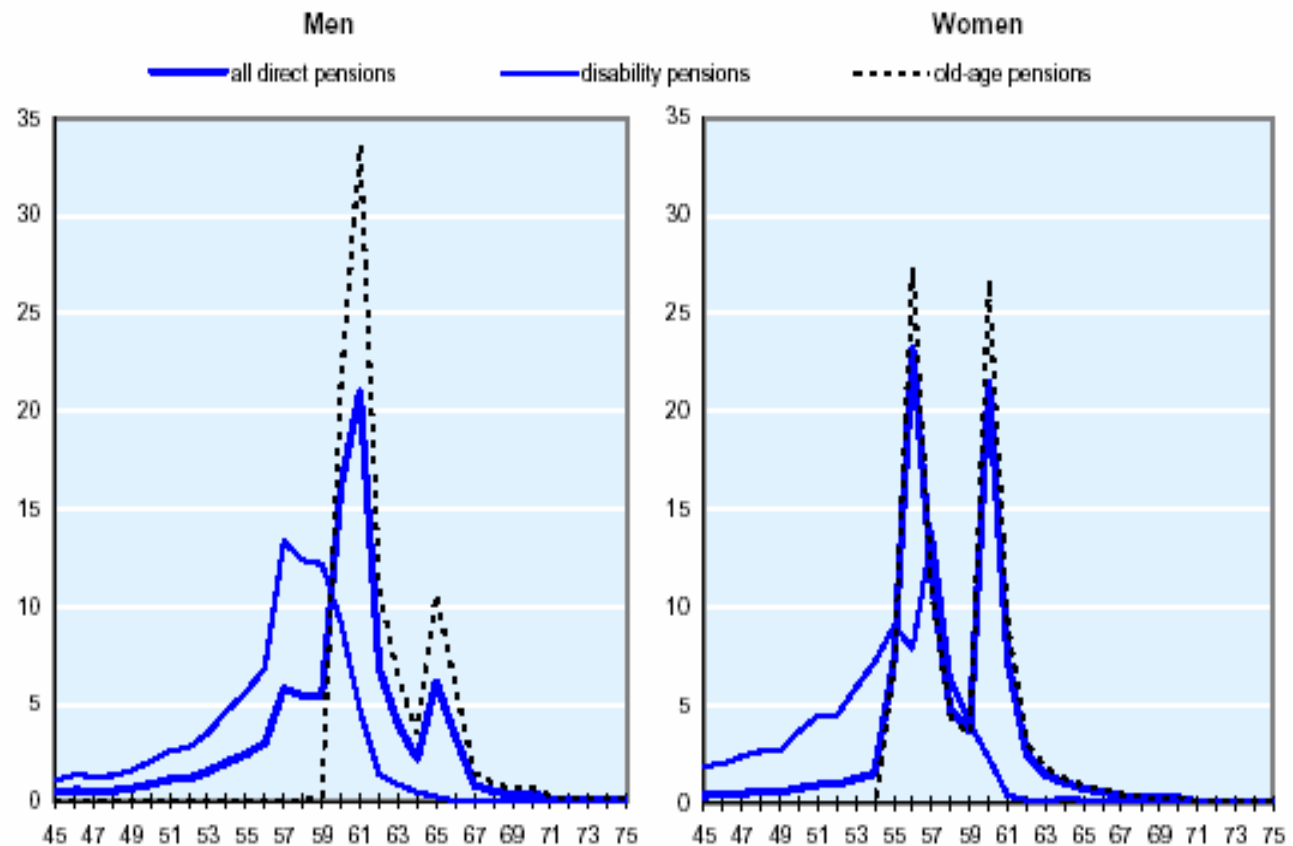
Labor market

- Disaggregated labor supply by sex and age groups
- Endogenous participation rates
- Partial adjustment towards employment given by FOC ($MPL=W$)
- Wage-bargaining with time-varying NAWRU
 - Tax wedge
 - Gross-replacement rates

Effective Retirement Age

Figure 3.1. Distribution of retirement ages by single year of age and gender, 2003

Percentage of the total inflow into retirement



Source: Social Insurance Authority (Hauptverband der Sozialversicherungsträger).



Government

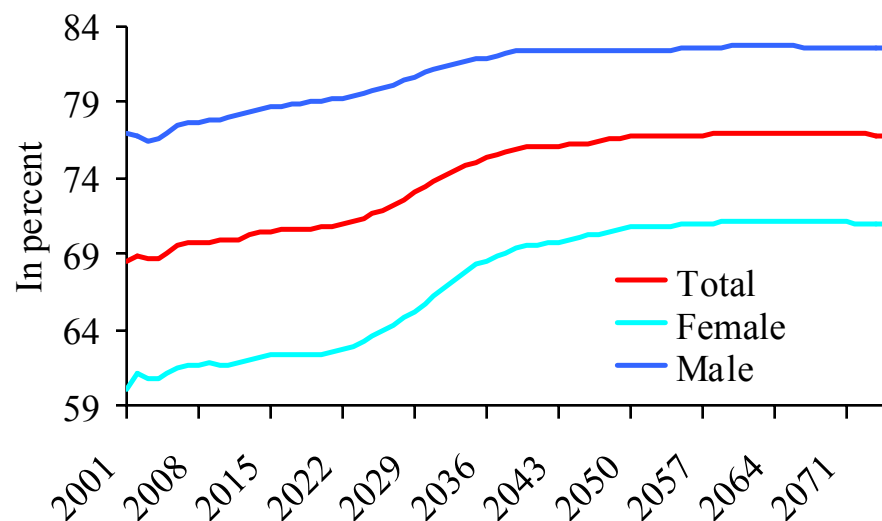
- Revenues
Direct and indirect taxes,
social contributions
- Expenditures
Social expenditures, subsidies,
interest payments, other transfers
to private households
- Various fiscal policy rules
Balanced budget
Constant expenditure share in GDP



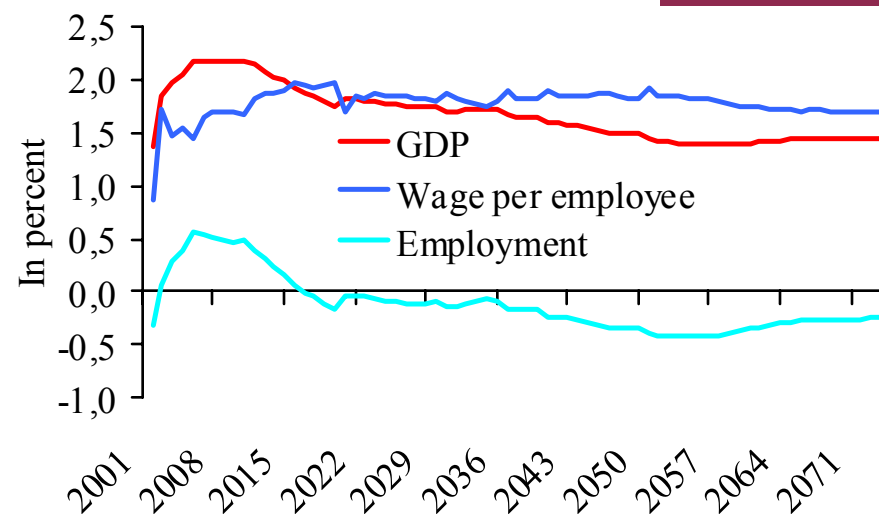
Social security

- Pension reform 2003 implemented
- Disaggregation
 - Health, pension, accident and unemployment insurance
- Revenues
 - Wages, contribution rates and lower and upper earnings threshold
- Expenditures
 - Demographic trends, wages, unemployment rate

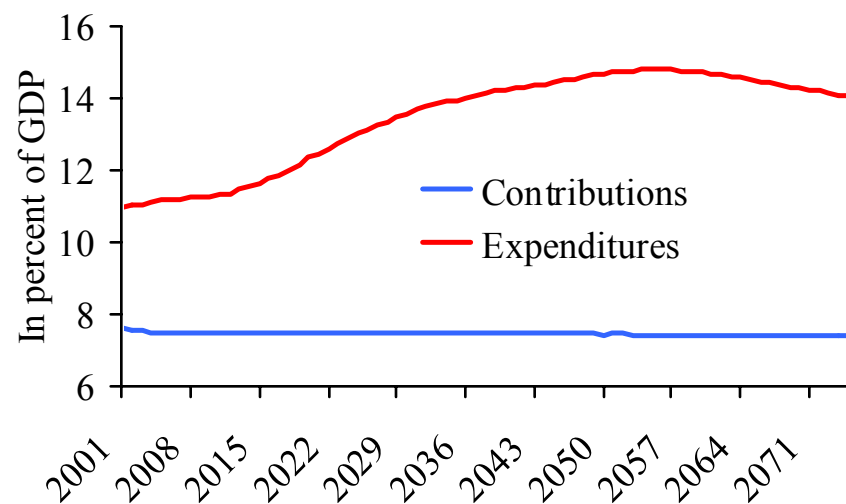
Participation rates



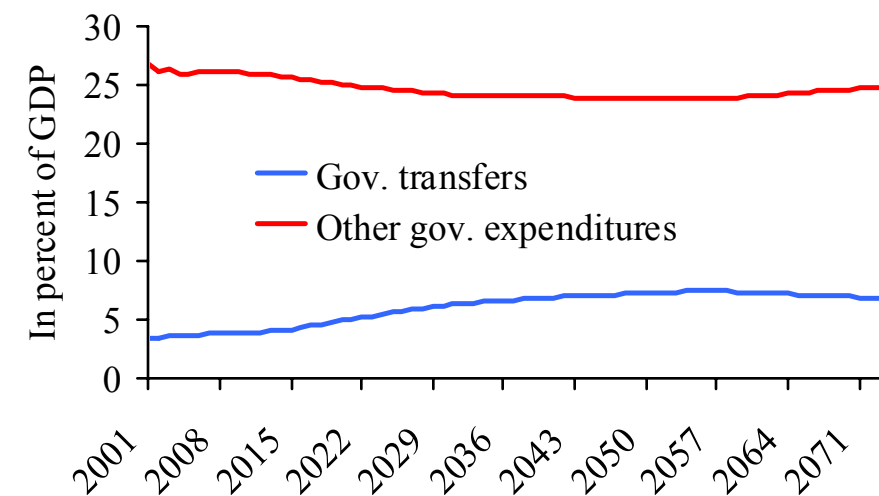
GDP, wages and employment



Social security pension system



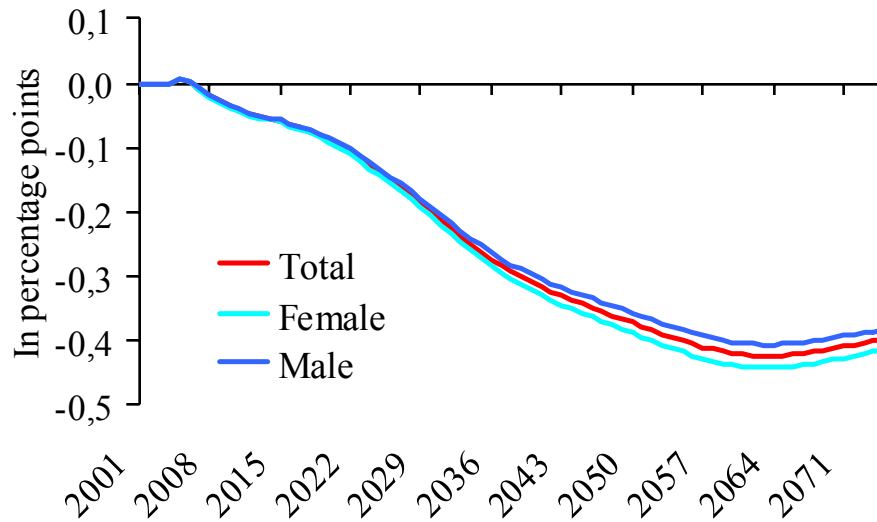
Public sector financial balance



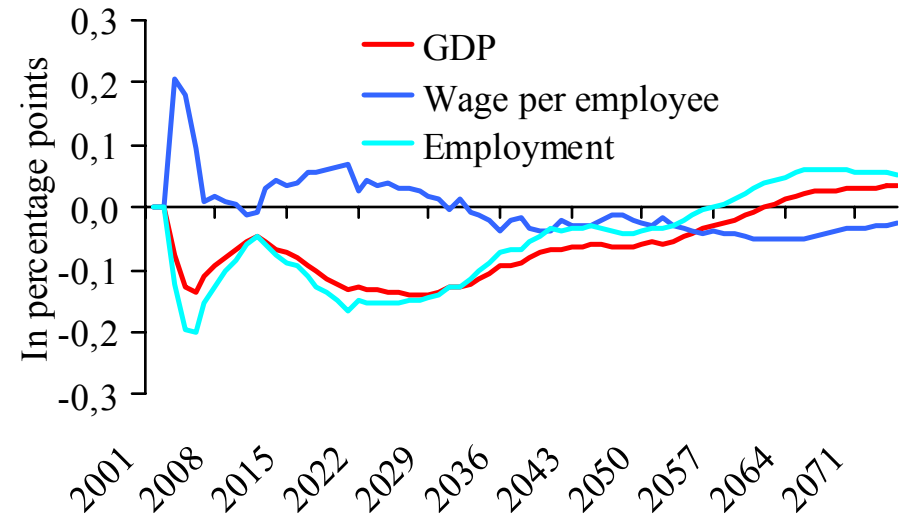
WIFO Balanced social security system



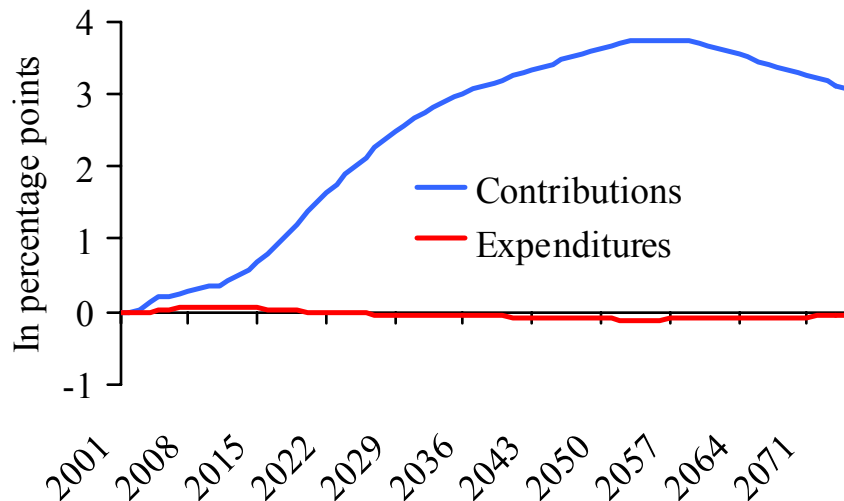
Participation rates



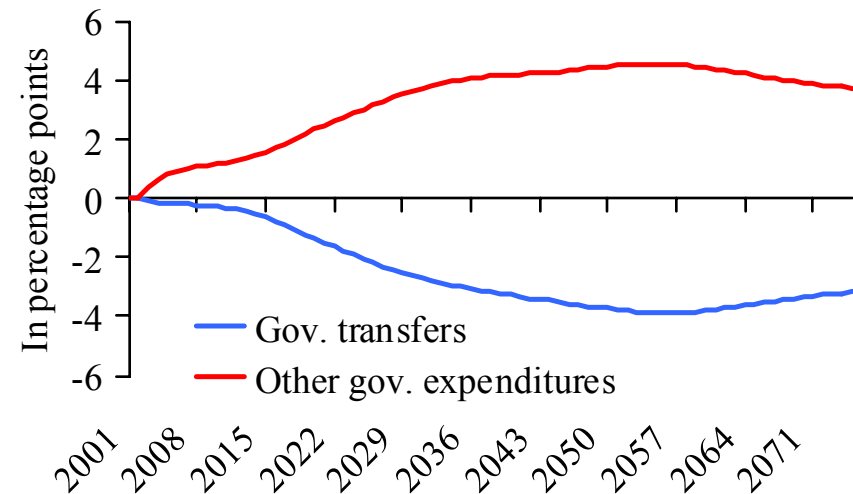
GDP, wages and employment



Social security pension system



Public sector financial balance





Thank you for your attention!