

# ECONOMIC POLICY





NEW

SZÉCHENYI PLAN

# ECONOMIC POLICY

Sponsored by a Grant TÁMOP-4.1.2-08/2/A/KMR-2009-0041

Course Material Developed by Department of Economics,

Faculty of Social Sciences, Eötvös Loránd University Budapest (ELTE)

Department of Economics, Eötvös Loránd University Budapest

Institute of Economics, Hungarian Academy of Sciences

Balassi Kiadó, Budapest



BALASSI KIADÓ



The project is supported  
by the European Union.

National Development Agency  
[www.ujszeczenyiterv.gov.hu](http://www.ujszeczenyiterv.gov.hu)  
**06 40 638 638**



**HUNGARY'S RENEWAL**



The projects have been supported  
by the European Union.

ELTE Faculty of Social Sciences, Department of Economics

---

# ECONOMIC POLICY

Author: Péter Pete

Supervised by Péter Pete

June 2011

# ECONOMIC POLICY

## Week 1

Introduction

Macroeconomic models

Péter Pete

# Introduction

- Course outline, requirements, literature, presentations, exams
- Assigned material is to be read beforehand class
- All participants will give at least one presentation
- Exam: end of term oral exam

# Introduction - repetition

- Economic Policy as such
- Purposeful set of actions carried out by the state, by the government
- A series of measures, regulations and rules to achieve specific economic goals
- An enormously wide range of targets and tools

# Makro policy

- Still a very large set of goals and tools
- Examples:
- Enhancing economic growth:
  - promoting skills and education,
  - improving labor market flexibility
  - policies to fasten technology development
- Tools: tax system, building institutions and markets, etc.



# Makro policy

- Incomes policy, redistribution
- Trade policy
- Regulating foreign trade and investment, exchange rate policy
- This course deals with counter-cyclical policies only, other issues emerge if they are related to that

# Counter-cyclical policy

- General notion: large economic cycles lead to misutilization of the economic resources (unemployment) and to other kinds of harmful tensions and economic problems.
- Counter-cyclical policy: an attempt to reduce the size of fluctuations, to stabilize the economy around the natural rate of output in time

# Models

- Logical constructs to pin down those elements and relationships of the economy that are relevant from the point of view of the concrete problem
- Abstractions, assumptions, conclusions
- We expect them to be: logically coherent, empirically relevant
- We have been using models for description, we will use them now for interpreting economic policy .

# Models

- Positive economics (Friedman)
- Descriptive and normative approaches. How to avoid „wishful thinking”?
- Model: system of interrelated markets. Behavior is described by mathematical functions
- Ends up as a system of equations to be solved

# General Equilibrium model

- Market for goods  $S(\dots\dots) = D(\dots\dots\dots)$
- Labor market  $S(\dots\dots) = D(\dots\dots\dots)$
- Money market  $S(\dots\dots) = D(\dots\dots\dots)$
- Forex market  $S(\dots\dots) = D(\dots\dots\dots)$
- Etc., Etc.
- Relevant macroeconomic variables appear among the arguments of the supply and demand functions of markets.

# Solution, operation

- Solution of a model: for given values of exogenous variables (such as  $G$ ,  $T$ ,  $M$ ) we search for the values of the endogenous variables ( $Y$ ,  $P$ ,  $C$ ,  $N$  etc.) resulting from economic behavior
- Operation of a model: how would a change in some endogenous factors modify equilibrium values or time paths of the endogenous variables?

# Normative questions

- Economic policy requires a normative approach. We use the same model, but switch the role of exogenous (tool) and endogenous (target) variables.
- We set targets for certain values, volatility (variations) or dynamic paths of certain macro variables.

# Normative questions

- For example, we set targets for the level and the rate of growth of output, level of prices or rate of inflation, unemployment rate, etc.
- We search for the values of macroeconomic policy variables, (or for the rules in setting these variables) that would produce the set values of the target variables.



# A simple example

- Open economy, fixed exchange rate, short run (see: Krugman-Obstfeld) economic policy in the Bretton Woods system.
- $T, I, G, e, P^*, P$  are given
- Equilibrium in the goods market:
- $Y = C(Y-T) + I + G + CA(eP^*/P, Y)$
- Current account balance:
- $CA(eP^*/P, Y) = ?$

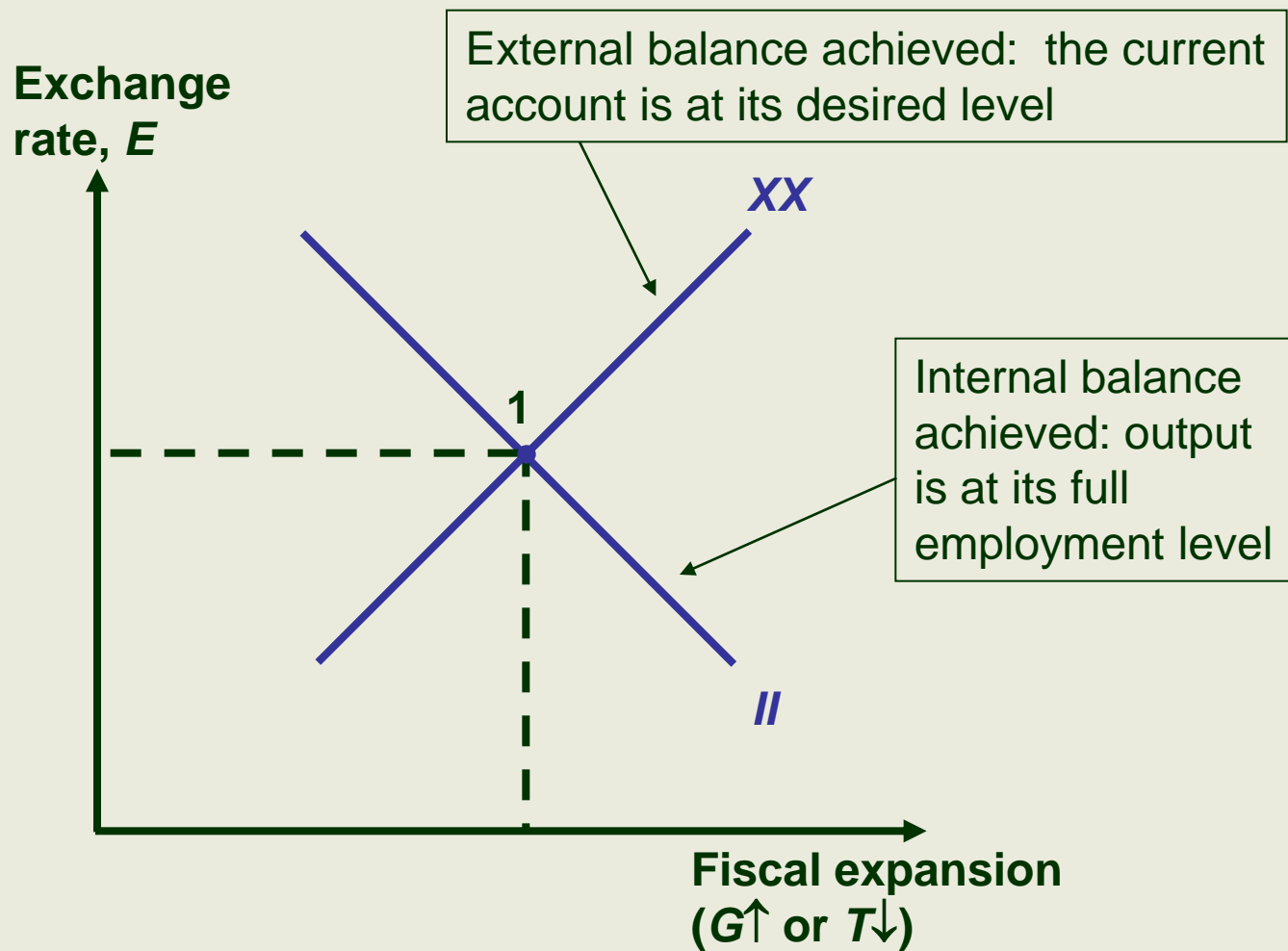
# Operation of the model

- Descriptive approach:
- Effect of expansionary fiscal policy:
- $Y$  grows,  $CA$  worsens
- Effect of a devaluation:
- $CA$  improves,  $Y$  grows
- The disturbance does not have to be policy initiated.

# Operation of the model

- Economic policy approach:
- We set desired value for  $Y^*$  ,  
internal balance
- We set desired  $X$  value for CA,  
external balance
- Question: what values of  $G$  and  $e$   
would result in external and internal  
equilibrium simultaneously?

# Swan diagram



# Policy debates

- Differences of opinion are large and frequently happen for obvious reasons.
- Preferences among policy targets vary widely.
- There are significant differences among analysts about how the economy actually works, what model describes it properly.

# Policy debates

- Economic policy decisions always involve income redistribution one way or another. Opinions differ with respect to the „fair” income distribution.
- All recall the concept of „national interests” but they see its content differently.

# Models – brush up

- RBC
- Williamson-style RBC model, two periods, the general model has infinite time horizon.
- Formally: a set of difference equations that goes toward a steady state
- Expectations are rational, there is perfect foresight.
- We concentrate on the market for goods and on the labor market

# RBC

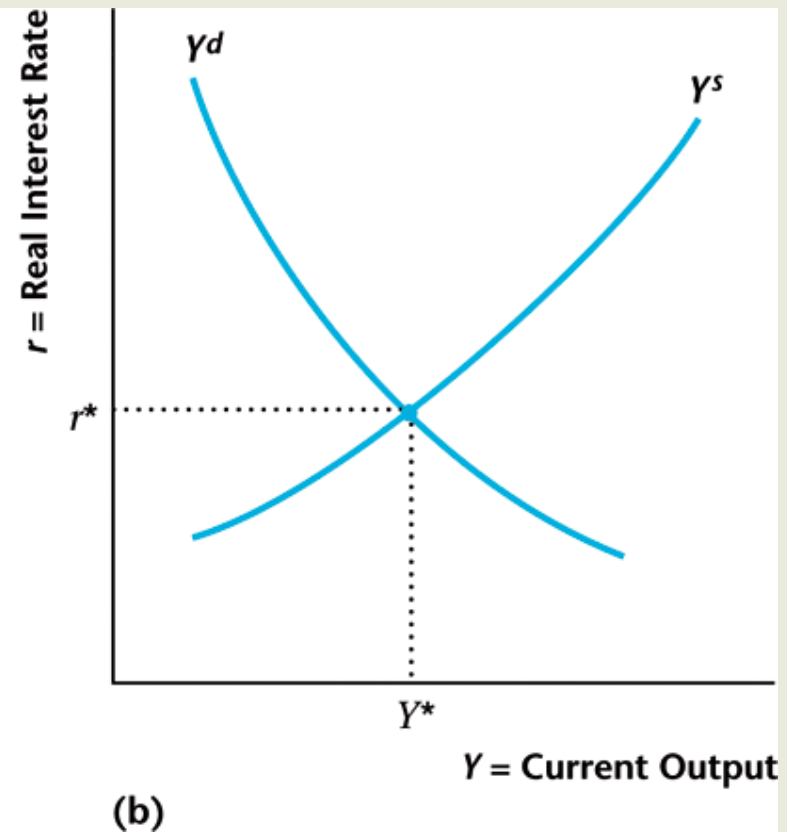
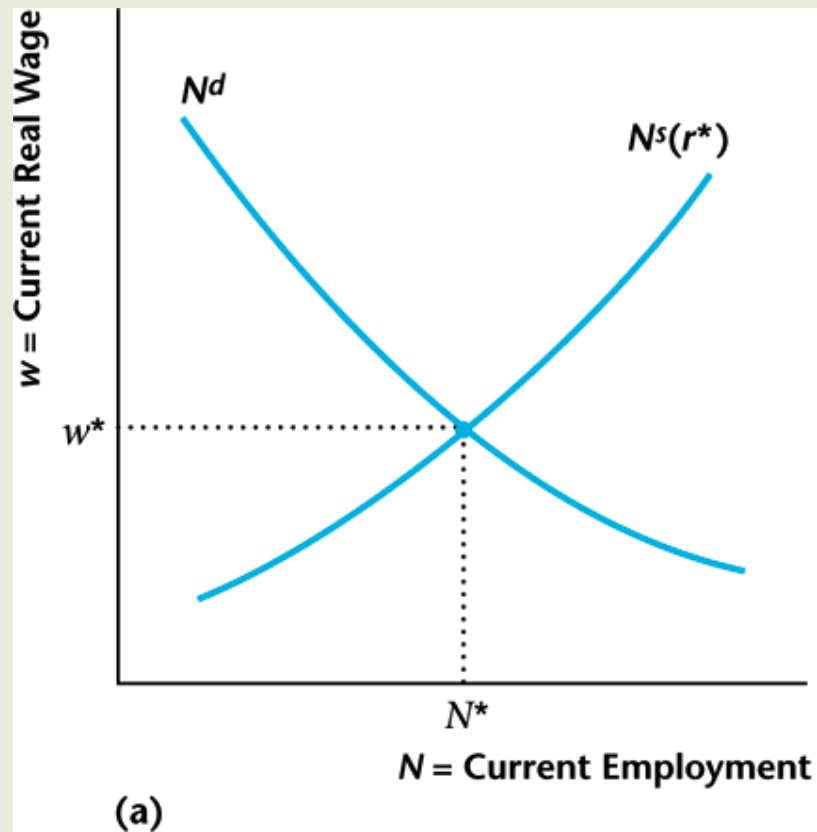
- Demand for goods:
- $Y_t = D(Y_t, Y_t, r_t, T_t, \dots) + G_t$
- Where D is private, G is government demand
- Ricardian Equivalence holds, timing of taxes do not matter
- Consumer demand comes from intertemporal optimization of the consumer, investment demand comes from profit maximization of the firm.



# RBC

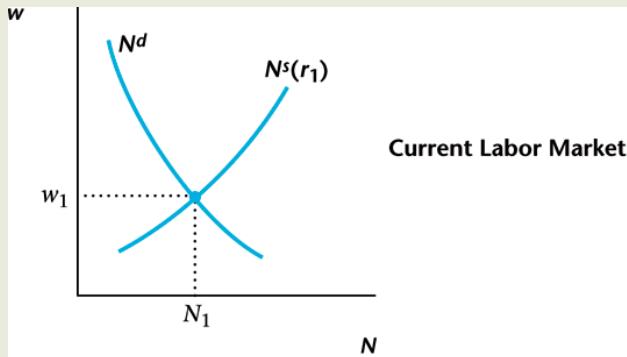
- Supply of goods
- $Y_t = z_t F\{K_t, N_t(r_t)\}$
- Where  $N_t(r_t)$  is equilibrium employment,  $z_t$  is TFP
- Labor market equilibrium:
- $N_t^d(w_t, z_t, K_t) = N_t^s(w_t, r_t)$
- Demand for labor comes from profit maximization of the producer, labor supply comes from consumer choice.

# The complete model

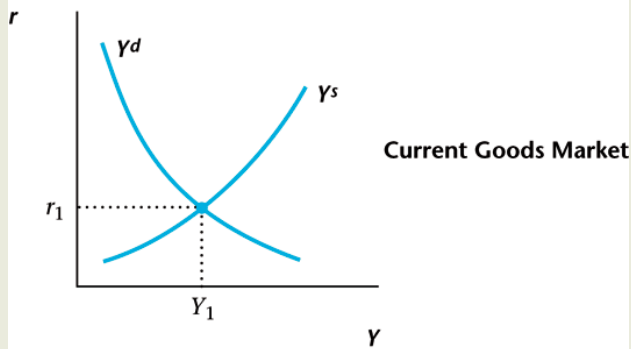


# Money

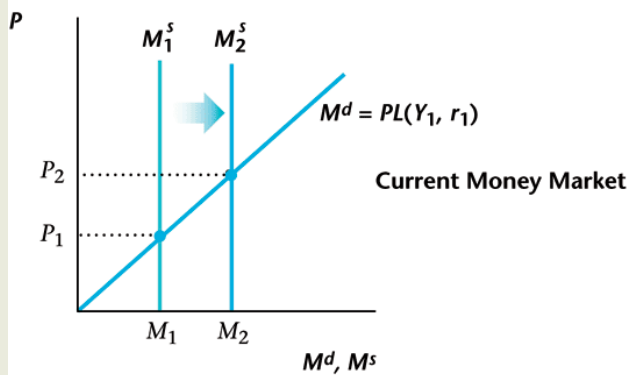
- Money does not have a significant role in this model (Why is it so?). Still, money market can be added.
- $M_t/P_t = L(Y_t, r_t)$
- Due to the lack of any nominal price rigidities, money is neutral in this model.
- $Y$  and  $r$  are determined by real factors only.  $M$  influences only  $P$  through the money market.



(a)



(b)



(c)

# One time increase in $M$

The classical dichotomy holds, a one time increase in  $M$  does not cause any change in  $Y$  or  $r$ , it changes the price level only.

# Model characteristics

- Micro based macromodel
- Dynamic, has forward looking expectations
- Perfect competition, Pareto-optimality
- No frictions, adjustment costs, information problems, uncertainties are assumed.

# Economic policy

- There is no role assigned for economic policy in this model. In a perfect market where all participants behave optimally and all market failures are assumed away, nothing can be improved.
- The system is always at the natural rate, all markets are in equilibrium. For useful economic policy we need market failures.

# Literature

- Mankiw (1989): Real Business Cycles: A New Keynesian Perspective, The Journal of Economic Perspectives, Vol. 3, No. 3
- Mankiw (2006): The Macroeconomist as Scientist and Engineer, The Journal of Economic Perspectives, Vol. 20, No. 4