NEW SZÉCHENYI PLAN

ECONOMICS 2

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

NEW SZÉCHENYI PLAN

Authors: Anikó Bíró, Gábor Lovics

Supervised by Gábor Lovics

June 2010

Week 6

The economy in the short run

Chapters 8

Outline

- What do we know?
- Aggregate demand
- Aggregate supply
- Effects of economic shocks in the short run

What have we learnt?

- Economics models simplify the world in order to answer concrete questions
- None of the models can describe every features of the world
- Question: what can and cannot explain the models discussed up to now?

Market equilibria

$$Y = F(K,L)$$
$$Y = C(Y - T) + I(r) + G\ (+ NX)$$
$$I(r) = S$$
$$M/P = L(Y, i)$$

Result

If K, L are given, then Y can be defined based on the production function.

The consumption function defines C if the fiscal policy is given, and the market equilibrium is ensured by I(r).

On the money market the central bank defines the nominal money supply, which has no effect on the real variables according to the classic dichotomy.

How can we use the results?

With our models we can analyze how exogenous shocks (e.g. fiscal or monetary expansions) affect our endogenous variables.

What can not be explained with them?

Why is there a crisis? The number of firms have not decreased, the output is still smaller.

Why does the economy increase faster than what is reasonable based on the growth of labor and capital?

Briefly: why are there economic fluctuations?

Empirical data

The economy in the short run

How can we modify our models so that we can analyze these questions? What does differentiate the short and long run?

In the short run the markets do not clear, do not adjust perfectly.

Modify the models

- Among the factors of production the labor is not constant. Thus the output can be temporarily smaller or larger than what the production function determines.
- The prices do not adjust immediately.

Quantity theory of money, once again

Model of the quantity theory of money:

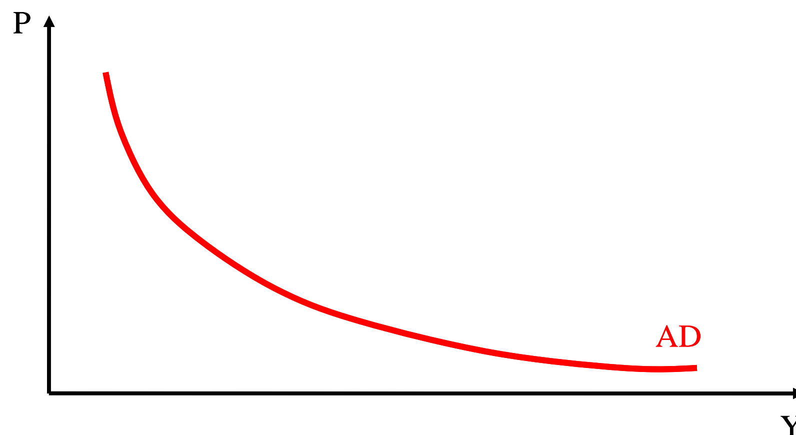
$$MV = PY.$$

Rearranging:

$$M/P = kY.$$

If M and k are exogenous and constant then there is negative relation between the price level and the quantity of goods and services. This negative relation is called the **law of aggregate demand**.

Aggregate demand function

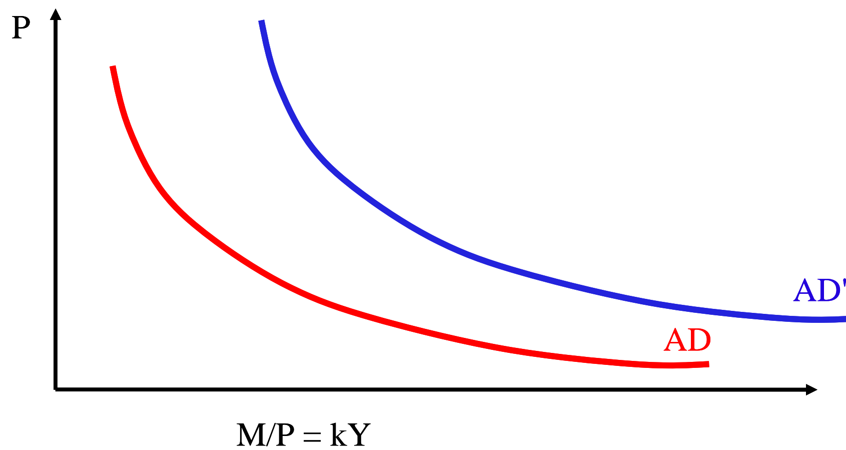


Why is the aggregate demand function negatively sloped?

Assumptions: the quantity and velocity of money are constant.

If prices increase then we can buy less goods and services with the same amount of money.

Effect of monetary expansion



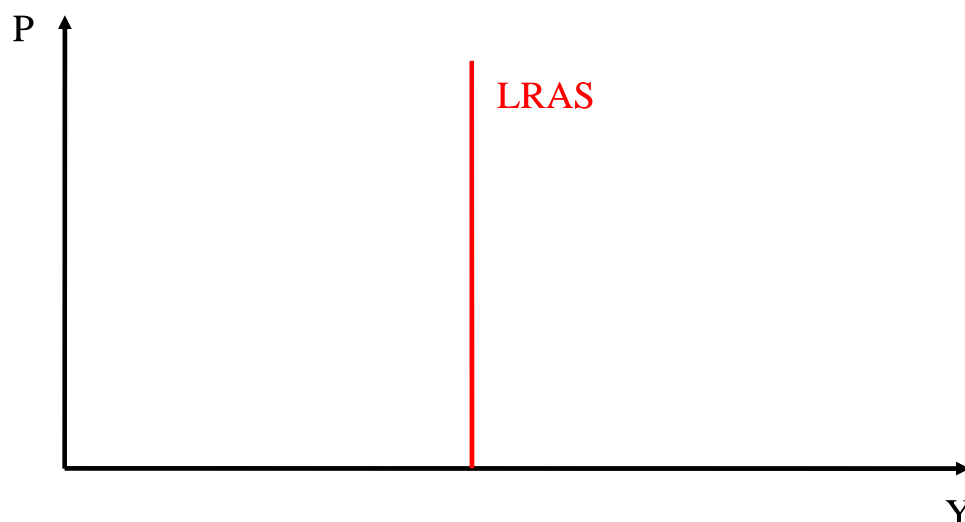
Aggregate supply

We illustrate the difference between short and long run through the aggregate supply function.

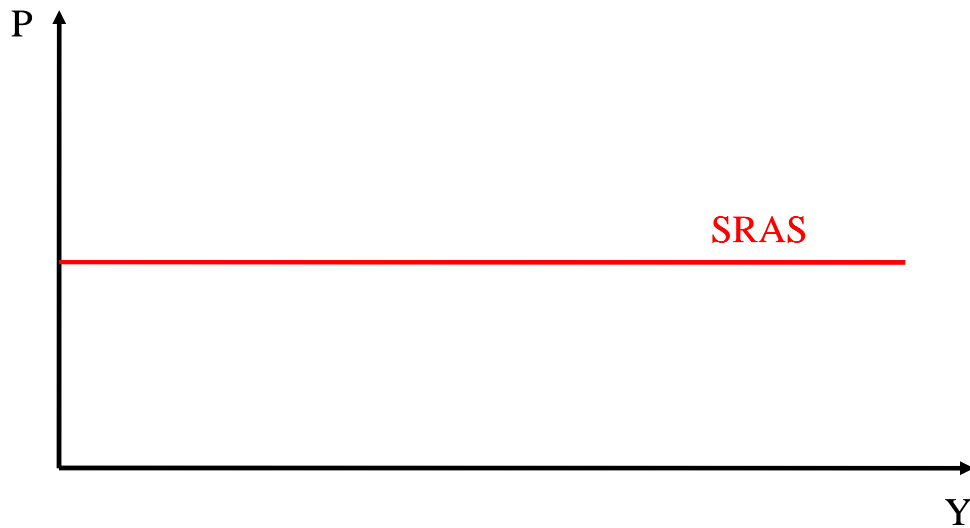
In the long run the prices adjust and the output is defined by the production function.

In the short run the prices cannot adjust, but the output can change.

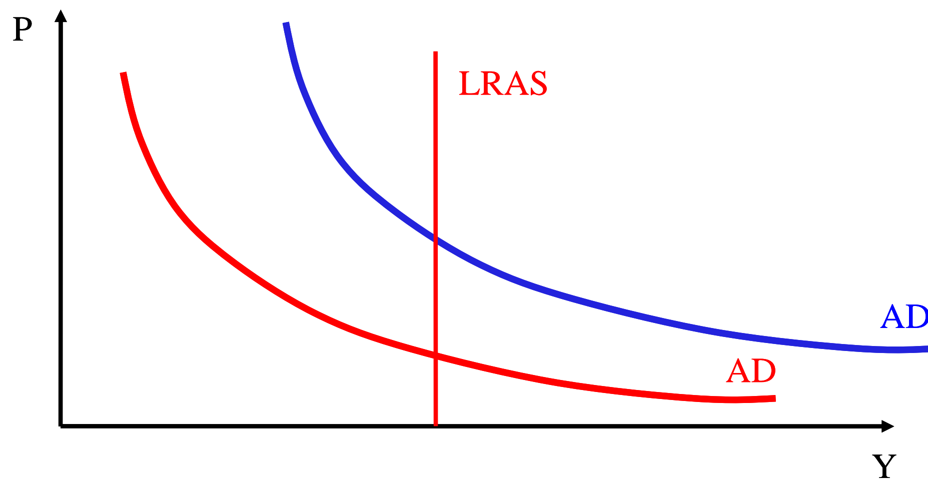
Aggregate supply in the long run



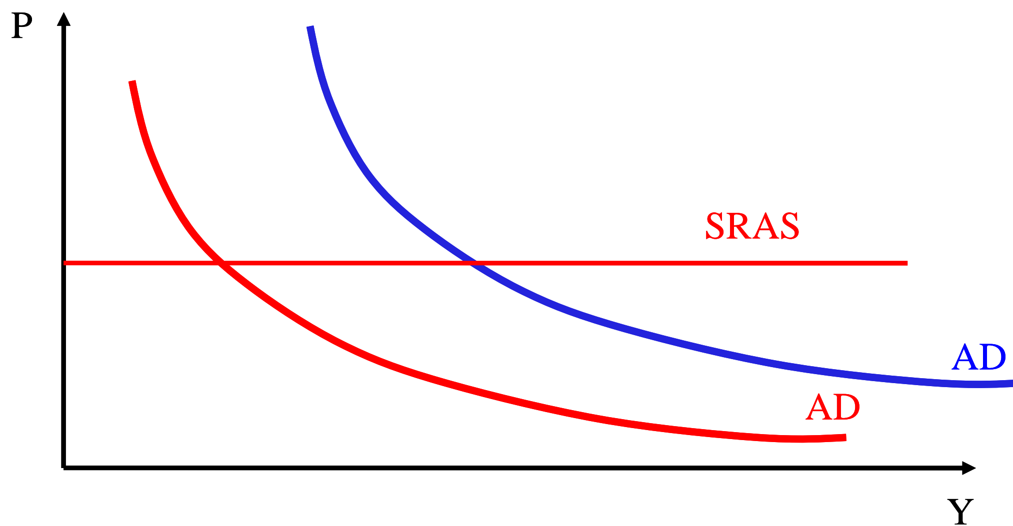
Aggregate supply in the short run



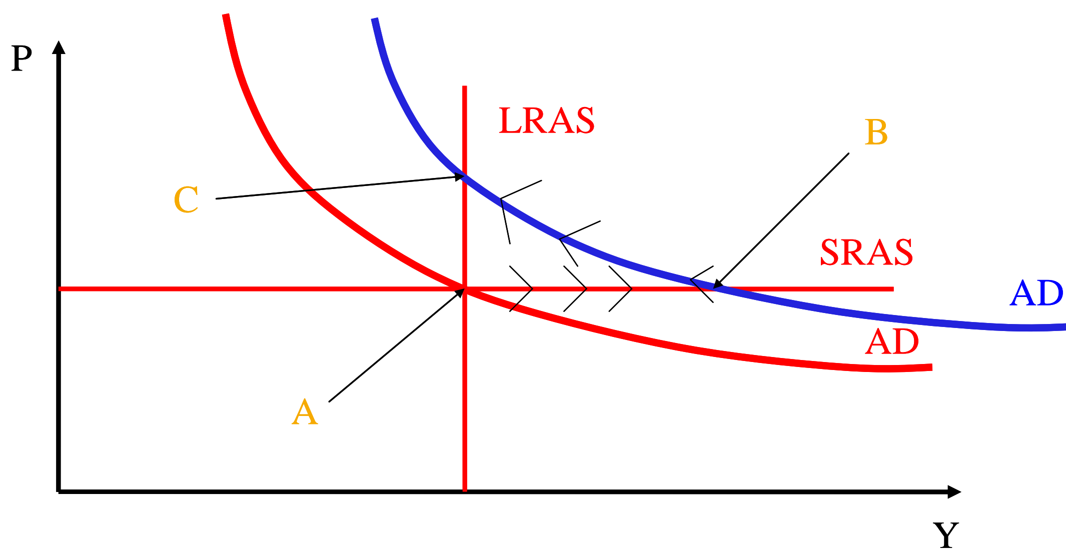
Monetary expansion in the long run



Monetary expansion in the short run



Transition between the short and long run



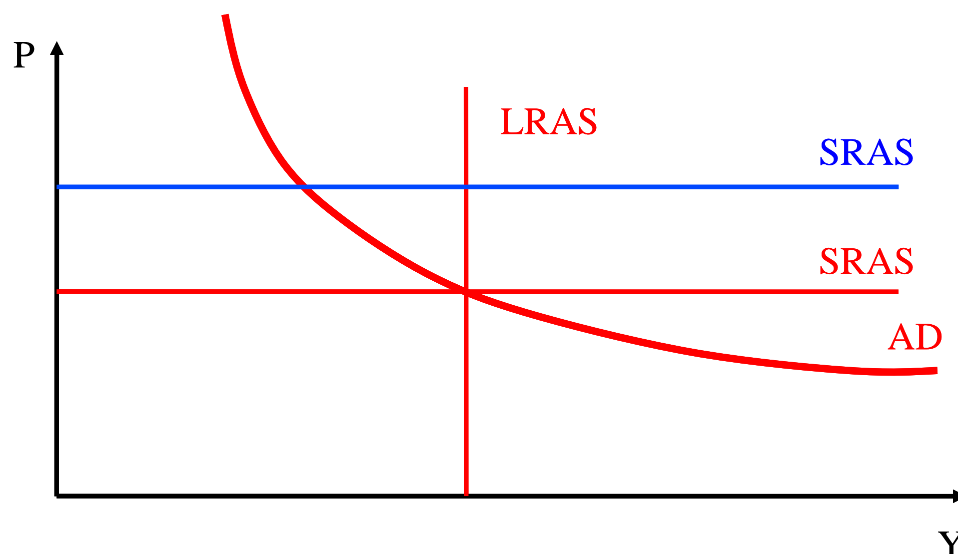
Other shocks

The monetary expansion is not the only shock that can affect the economy. Monetary tightening is also possible, then the same process takes place but in the other direction.
The velocity of money can also change.

Shocks affecting the aggregate supply

Shocks can affect not only the aggregate demand, but also the aggregate supply. These shocks affect the producers in the economy and the prices set by them.

The effect of an aggregate supply shock on the economy



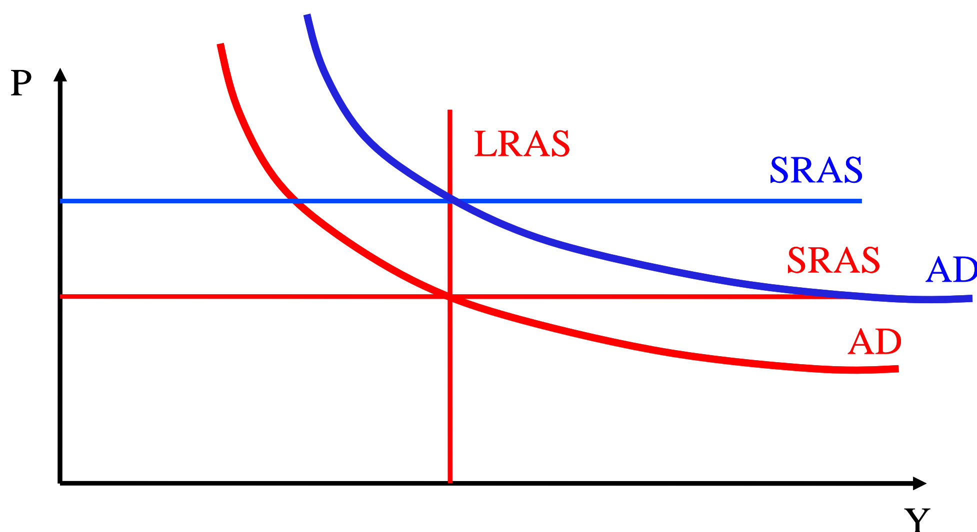
The effect of an aggregate supply shock on the economy

As a result of the supply shock the producers are willing to sell only at higher prices and less products. This increases the price level (inflation), and at the same time decreases the output.

The situation when an economy stagnates, and there is inflation at the same time is called **stagflation**.

Can the stagflation be avoided with the tools of monetary policy?

Aggregate supply shock and active monetary policy



The effect of monetary policy

The monetary policy could prevent the temporary stagnation, but not the inflation.