

MACROECONOMICS

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



Authors: Áron Horváth, Péter Pete

Supervised by: Péter Pete

February 2011

Week 13

Keynesian model II.

Rigid wages

Rigid prices

- In the rigid price model the price level is exogenous
- It is not a result of economic decision, the model lacks micro foundation
- It contradicts the idea of producers taking optimal decisions
- In modern, new-keynesian models staggering prices are the result of difficulties producers face while setting optimal prices

Handling price rigidities in equilibrium models

- Setting the optimal price is costly, requires information. Doing revisions too often may not be worth it. If these difficulties are built into optimization models, then staggering price adjustment can be part of the optimization process. (New-Keynesian models)
- Modeling this is technically difficult, requires monopolistic competition rather than perfect competition in the market

Rigid wages

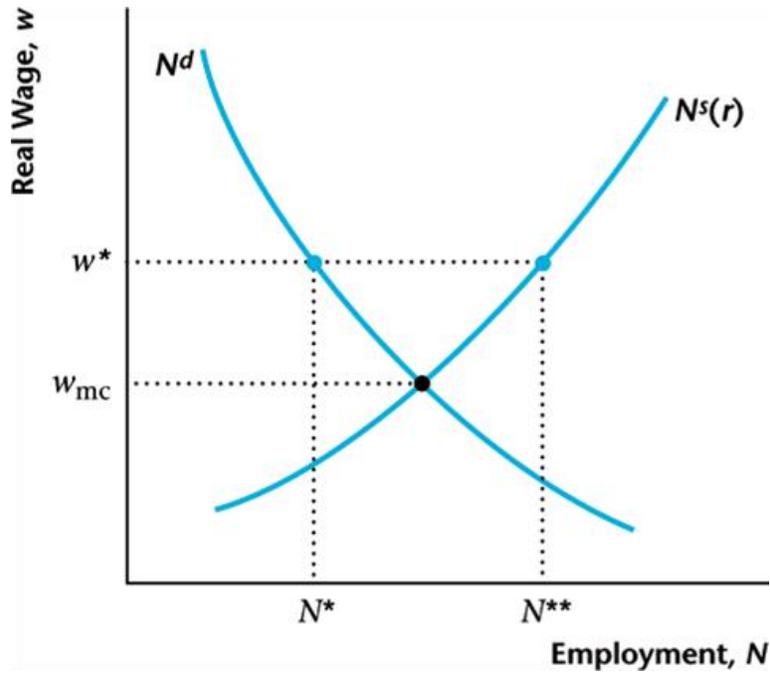
- We assume flexible prices, but nominal wages are considered to be rigid
- Nominal wage contracts set wages for a lengthy time period
- The process can be modelled explicitly, but we do not do it
- Simply assume: wages are rigid
- Consequence: labor market does not clear, there is unemployment
- Short run and long run
- Like in the rigid price case, nominal variables will have influence on real variables. Money is not neutral
- Changes in aggregate demand will have impact on real variables, output and employment through the changes in nominal variables
- Macroeconomic policy may want to take advantage of this fact

Rigid wages – supply

- Supply can also be modeled in this rigid wage model
- Labor demand and supply are functions of the real wage, just as they are in the RBC model
- However, if the nominal wage is rigid, then the real wage (W/P) cannot clear the labor market
- Given W , it is the price level that determines the real wage. The price level clears the market for goods, it is determined there

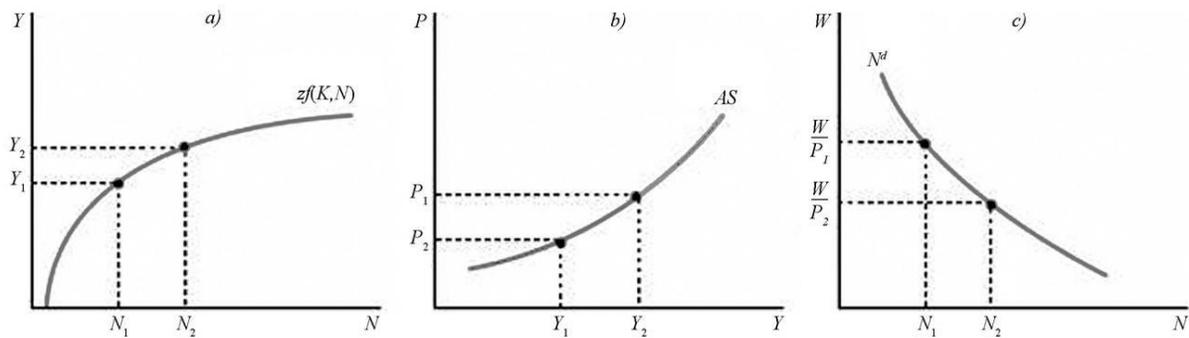
Supply – labor market

- Nominal wage is rigid (constant), real wage is determined by the price level. The real wage given independently of the labor supply, employment is determined by labor demand only



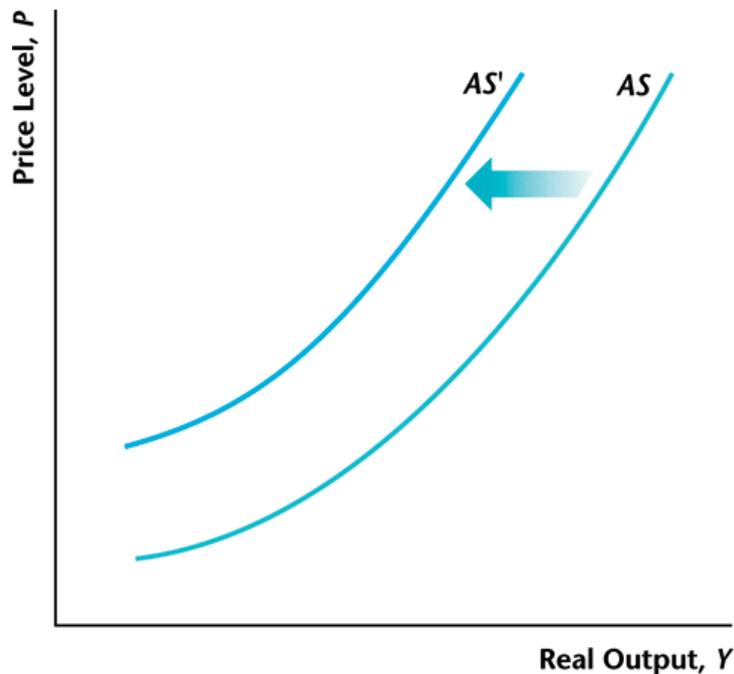
Aggregate supply

- W is given, real wage is function of the price level. Higher P is, lower the real wage becomes. Employment is larger, therefore output is bigger. The output supply is a function of the price level



Factors that shift the AS

- Any exogenous shocks that affect labor demand or supply would also shift the AS curve
- An exogenous increase in W
- A decrease in TFP etc.

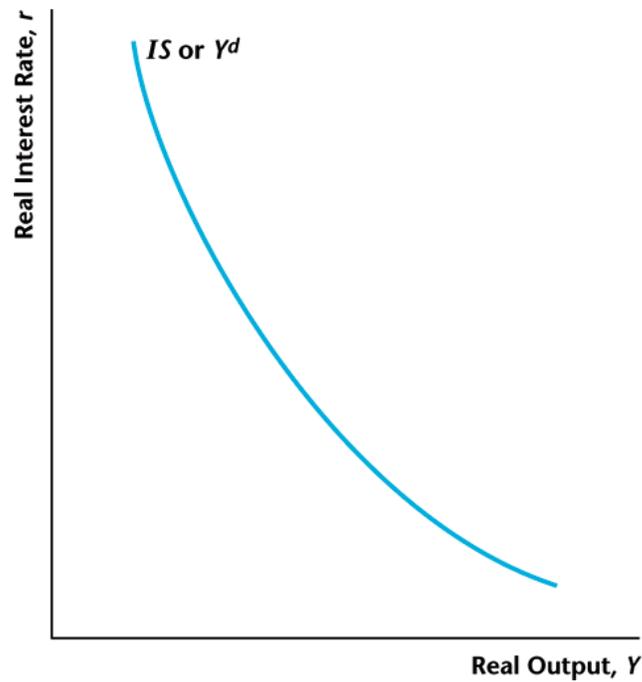


Aggregate demand

- The demand side is the same as described in the rigid price keynesian model
- All of the conclusions we derived with the system of IS-LM curves hold also in this model
- In this case the IS-LM equilibrium determines aggregate demand only. We have a separate theory to determine the supply behavior

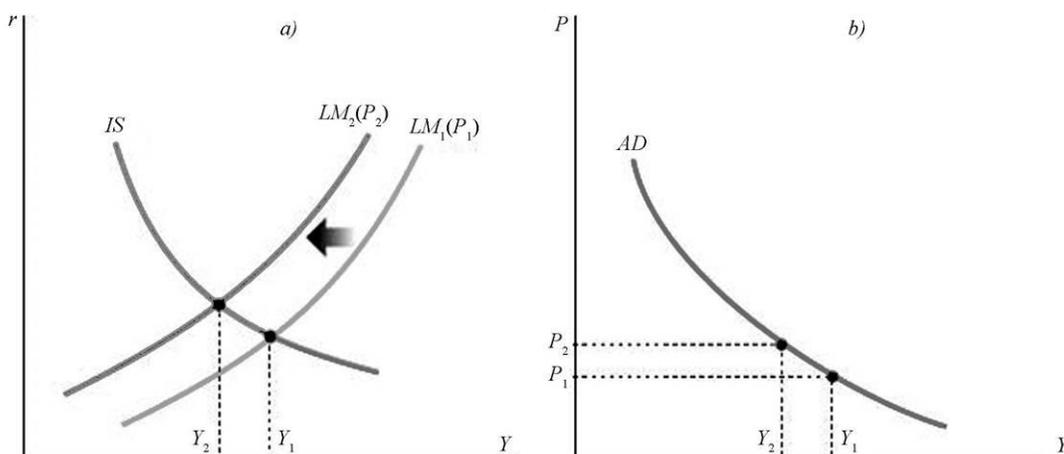
IS-LM equilibrium

- For given P and M the system determines the rate of interest as well as the demand for real output



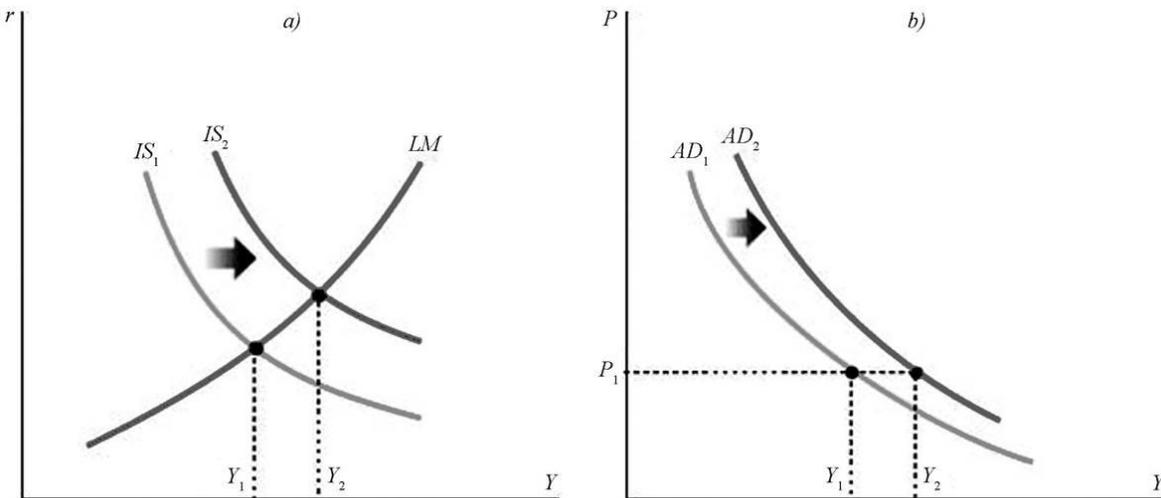
Aggregate demand

- Derived from the IS-LM equilibrium with letting the price level to change. Notice, demand for output is a function of P because the equilibrium rate of interest is a function of P



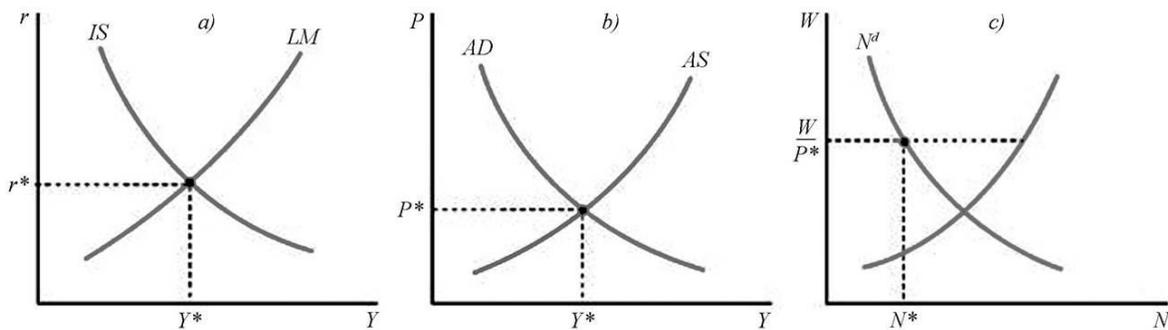
Shifts in the AD curve

- Any factor (apart from P) that shifts either the IS or the LM would shift the AS curve.
Illustration:
an increase in G

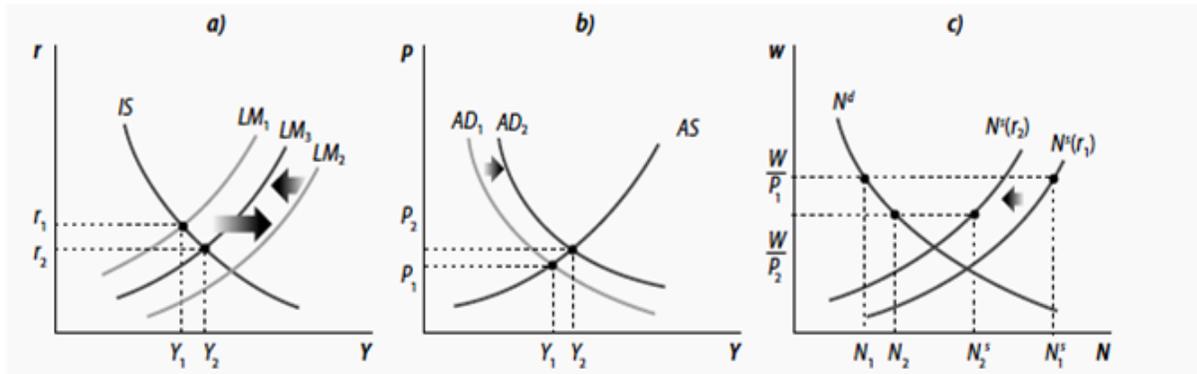


The complete model

- Nominal and real variables influence each other. Classical dichotomy does not hold.
The labor market is not in equilibrium, unemployment exists



Money is not neutral



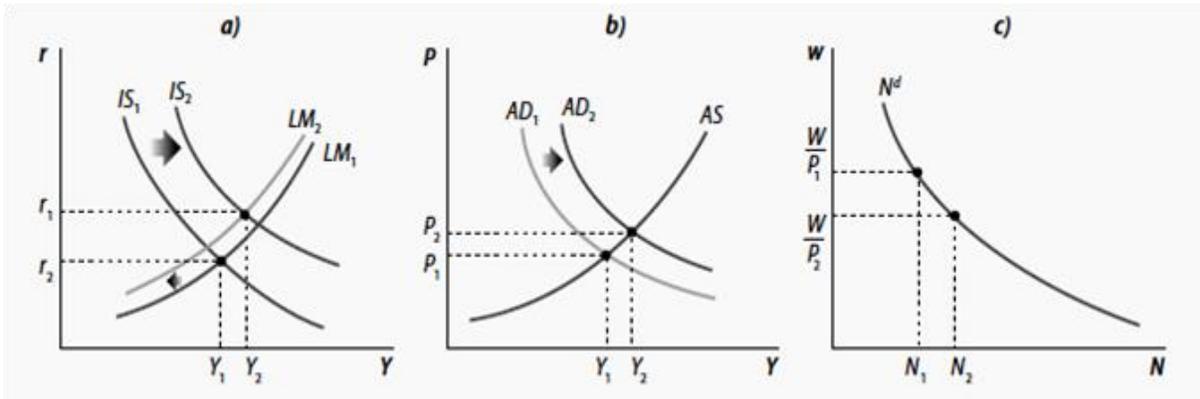
- If M increases, P also increases, but M/P also increases. r decreases, Y increases, real wage decreases, I , C , N increase, unemployment decreases
- Transmission through the interest rate
- Long run?

Can fluctuation in M cause the cycle?

- Friedman, Schwarcz and the Monetarism
- Empirical observation: M is procyclical and leading
- Some macro variables fit this theory, (Y , N , C , I) some others do not (real wage, productivity and P)
- Doubt: why would the central bank allow large fluctuations in M if it knew it would cause cycles?

Keynesian demand shocks

- (Animal spirit) Large fluctuations in investment demand due to changing expectations with respect to future profits



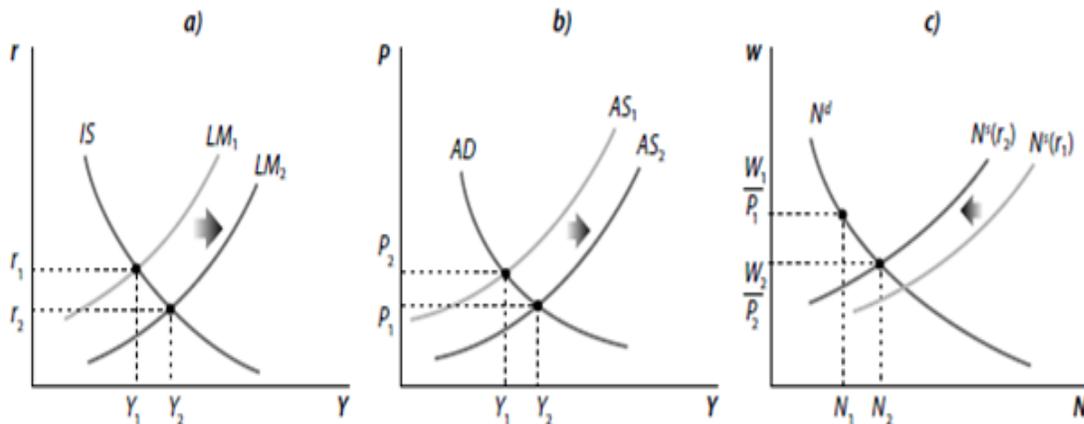
Behavior of the price level, productivity and the real wage does not fit stylised facts

Stabilization policy

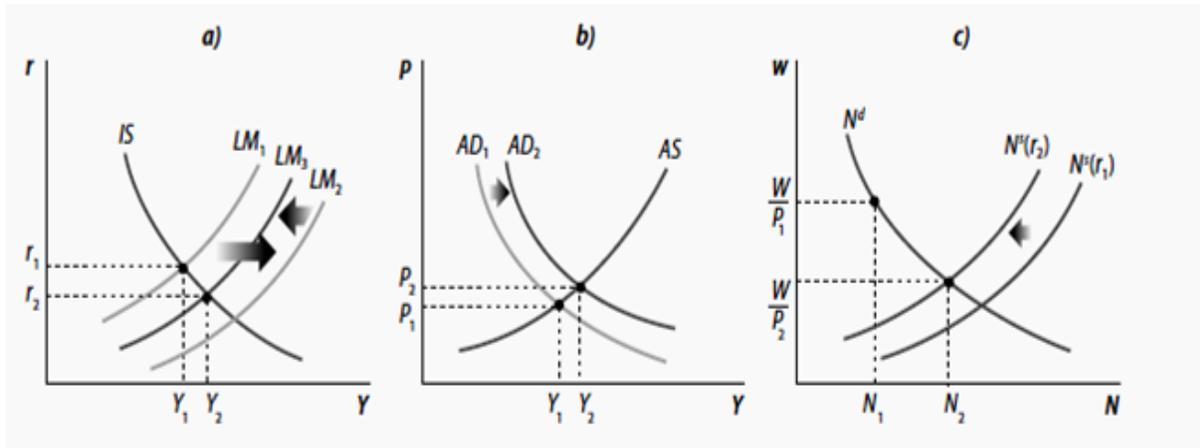
- In case of recessions, unutilized capacities, large unemployment, can we intervene using monetary or fiscal policies to push the economy back towards the natural ate?
- In the long run the economy would correct itself through the adjustment of prices and wages. Can we make the adjustment faster?

Self-correcting mechanism

- Through adjustment of the nominal wages. It may last too long

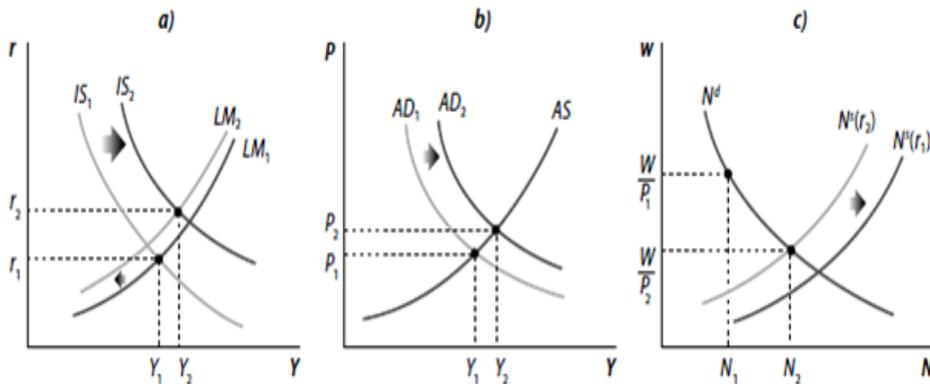


Stabiization with expansionary monetary policy



P increases, unemployment decreases, r decreases. Output increases, real wage decreases but C increases

Stabilization with fiscal expansion



r increases, G crowds out consumption and investment

Limits of demand side stabilization policy

- Using or misusing the monetary and fiscal tools?
- Do we know enough?
- Are we fast enough?
- Lags in collecting information, in designing policy, in implementing policy, in the economy's adaptation to policy
- Lags are long and variable

Summing up

- Comparison of different macro models
- Differences in the opinions about what economic policy to follow
- Why do economists disagree?

Vége

ELTE Faculty of Social Sciences, Department of Economics

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We welcome any questions, critical notes or comments we can use to improve it.

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