

Economics II

Aggregate Demand and Aggregate Supply Part 1

Aggregate demand curve and Aggregate supply curve - derivation and characteristics

The lecture is based on the clarification of the economic context, processes and principles to explain the foundation the curves of aggregate demand and aggregate supply curve and provide students with prerequisites for a deeper and more accurate understanding of the nature of the functioning of the market mechanism.

Content:

- ❖ Introduction
- ❖ Aggregate demand and its characteristics
- ❖ Aggregate supply and its characteristics
- ❖ Conclusion – summary, list of tasks for students

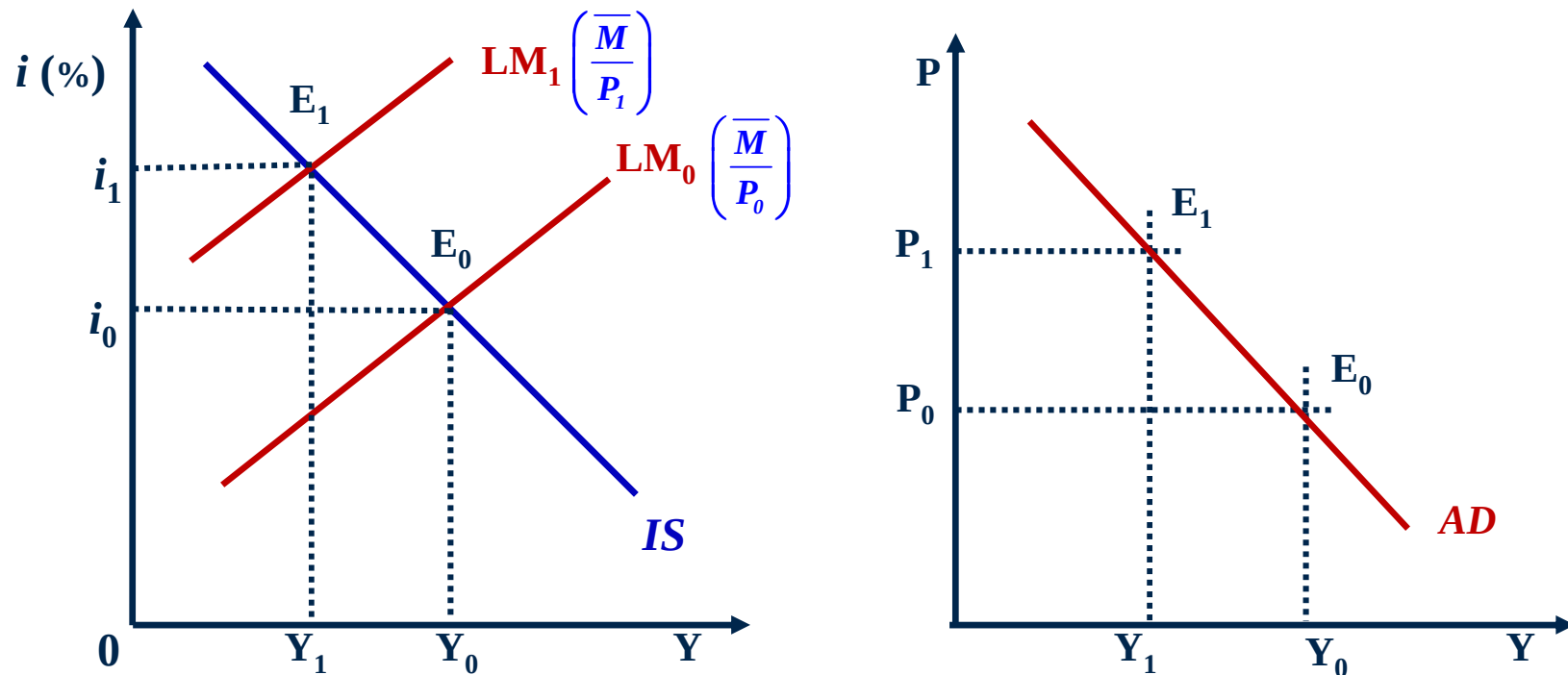


INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ



Aggregate demand and its characteristics

a) The derivation of AD curve using the IS-LM model



The aggregate demand curve shows a combination of price levels and the levels of equilibrium production (aggregate expenditures) under which the market for goods and services and money market (assets) are simultaneously in equilibrium.

$$Y = \gamma \bar{A} + \beta \frac{\bar{M}}{P}$$



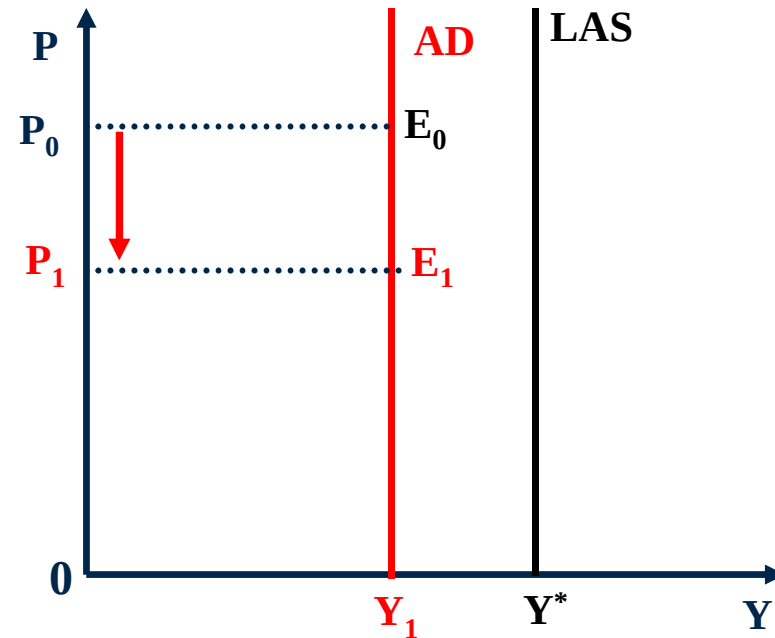
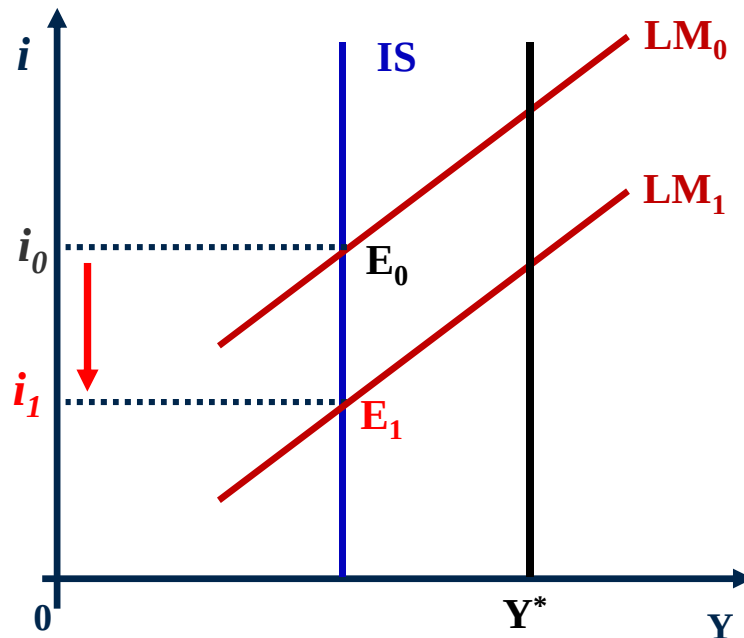
The equation of AD curve:

$$P = \beta \cdot \frac{\bar{M}}{Y - \gamma \bar{A}}$$

**b) Vertical IS and vertical AD:
„deflationary impotence“**

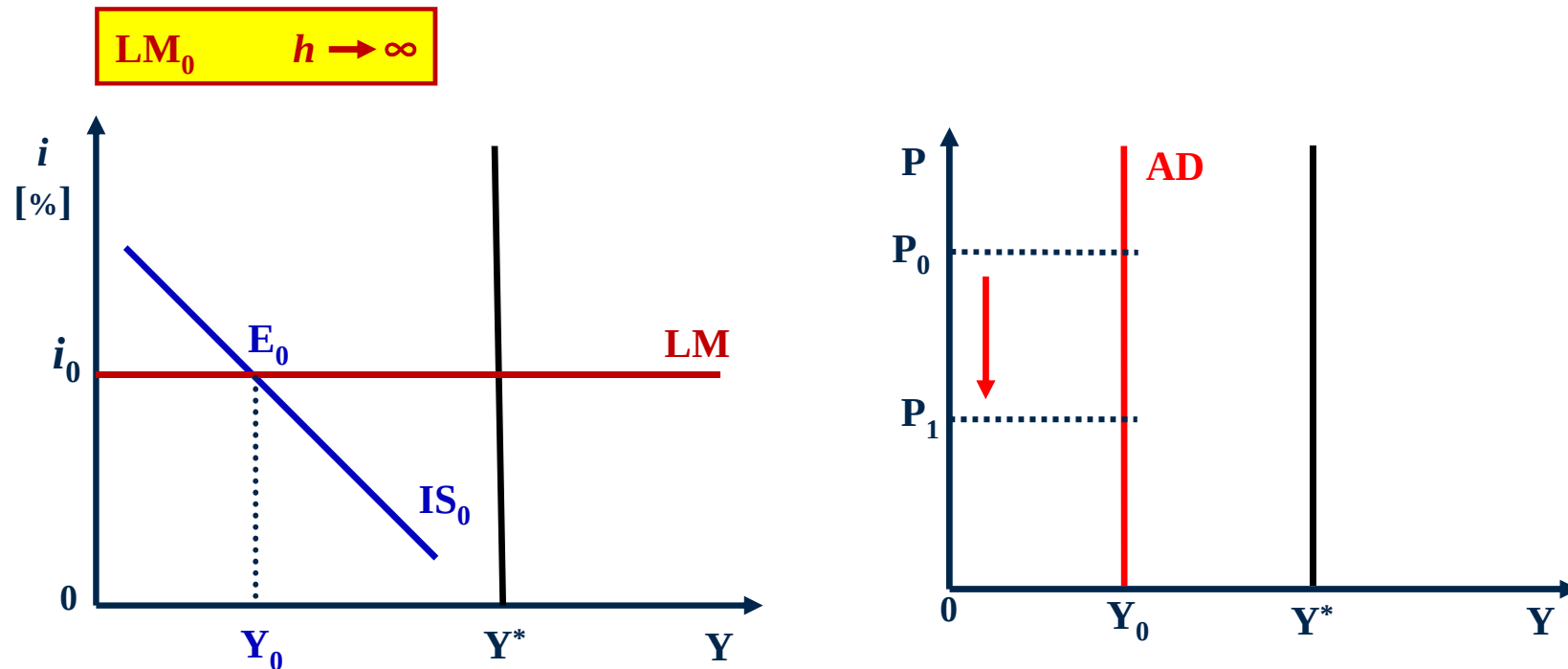
$$b = 0$$

$$P_0 \rightarrow P_1 \rightarrow \uparrow \bar{M}/P_1 \rightarrow \downarrow (i_0 \rightarrow i_1) \rightarrow (C+I) = 0$$



Deflationary situation impotence is called the continuing lack of aggregate demand, respectively inability of the economy to regulate itself at levels of not full employment. The reasons are pessimistic expectations of entrepreneurs and consumers, respectively low levels of consumer and business confidence. Solution: to increase planned autonomous expenditures, i.e. expansionary fiscal policy.

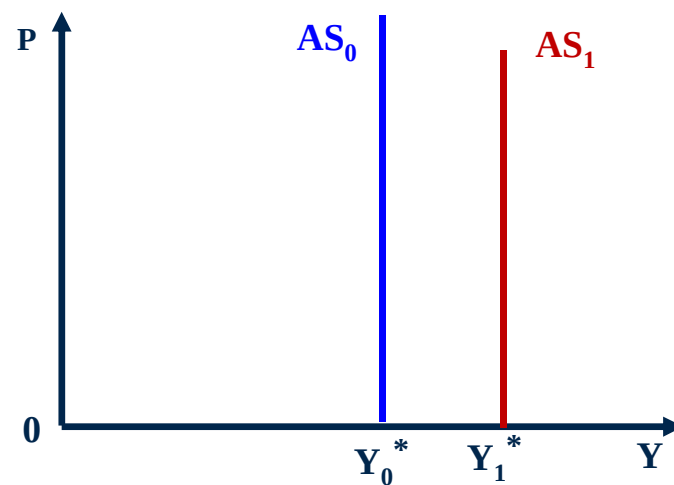
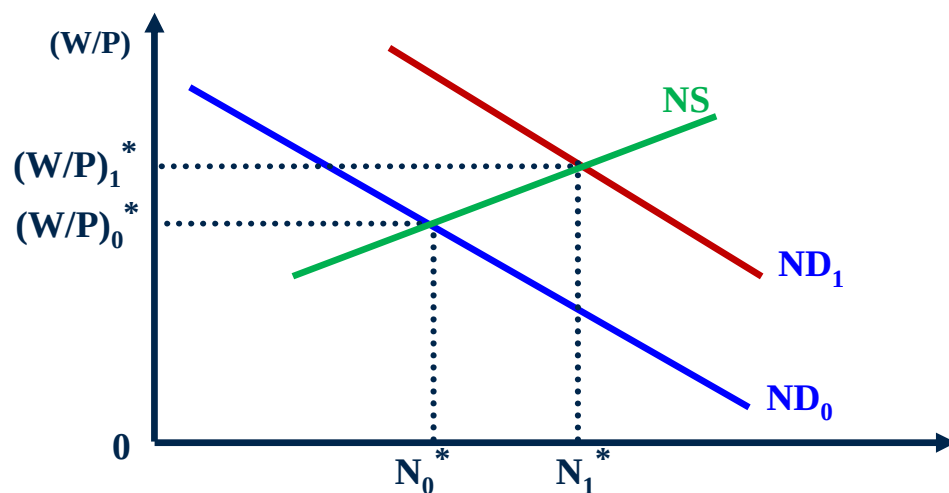
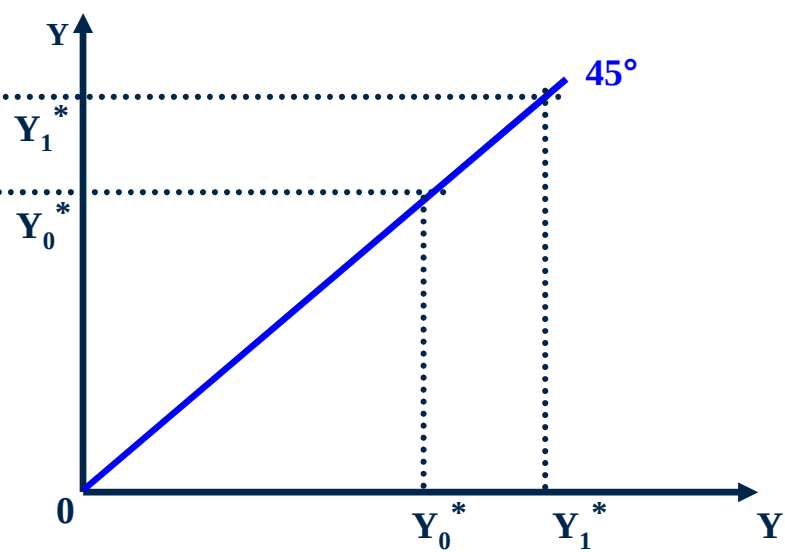
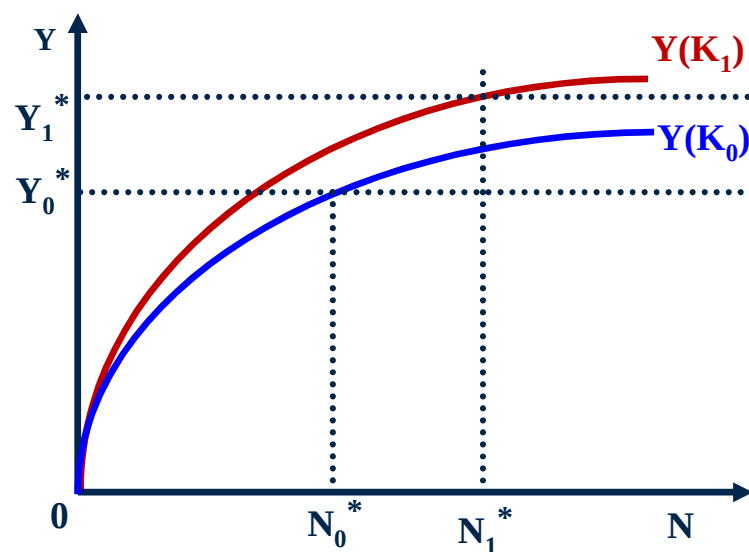
c) Horizontal LM curve and vertical AD curve (line): „liquidity trap“ case



In this situation, an increase (decrease) in nominal stock of money and thus increase or decrease of real money balances due to growth or decline in the price level will not change the interest rate. Cause: the high sensitivity of money demand to the interest rate.

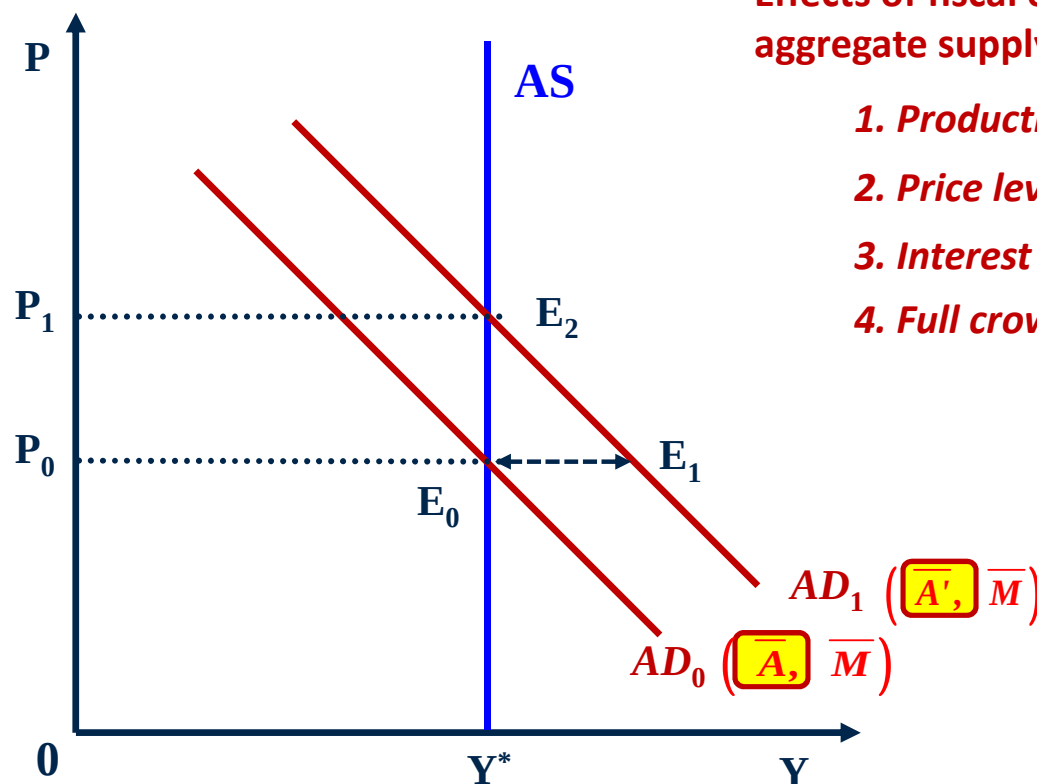
AD curve is vertical: monetary policy is impotent; an increase in real money balances will not increase the actual production towards Y^* and unemployment towards the natural rate of unemployment.

b) Classical curve of AS and monetary and fiscal policy



❖ Fiscal expansion and classical AD curve (line)

Fiscal expansion $\Rightarrow$ $\boxed{\bar{A} + \Delta\bar{G} = \bar{A}'}$



Effects of fiscal expansion provided the classical aggregate supply curve:

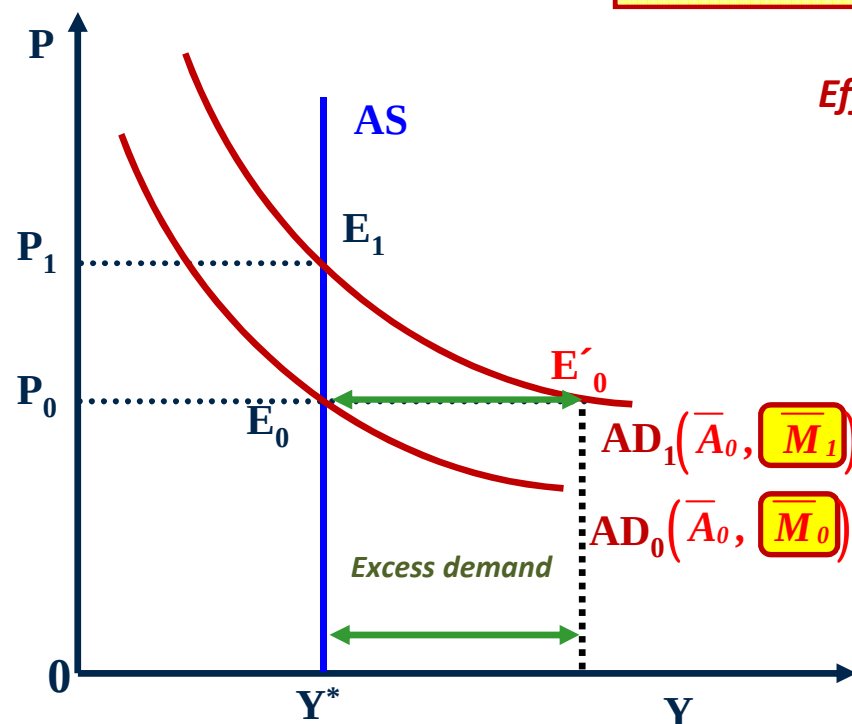
1. Production and employment will not change.
2. Price level will increase.
3. Interest rate will increase.
4. Full crowding-out effect.

❖ Monetary expansion and classical AS curve (line)

Monetary expansion



$$\bar{M}_0 \rightarrow \bar{M}_1 \quad (\bar{M}_0 < \bar{M}_1)$$



Effects of monetary expansion:

1. Production and employment will not change.
2. Real money balances will not change.
3. Interest rate will not change.
4. Price level will increase as the money supply has been increased (Cambridge effect and money neutrality).

The equation: $M.V = P.Y$

According to the classics, there is a self-regulating mechanism - the forces that guide the economy to full employment and prevent the real output (Y) and significantly longer period deviated below (or above) the level of Y*. The economy therefore remains largely (and in the short term) close to the long-term aggregate supply curve (LAS).

The core of this mechanism represents perfectly flexible wages and prices, which immediately absorb the effects of changes in aggregate demand.

c) Extreme case of AS curve and fiscal expansion policy

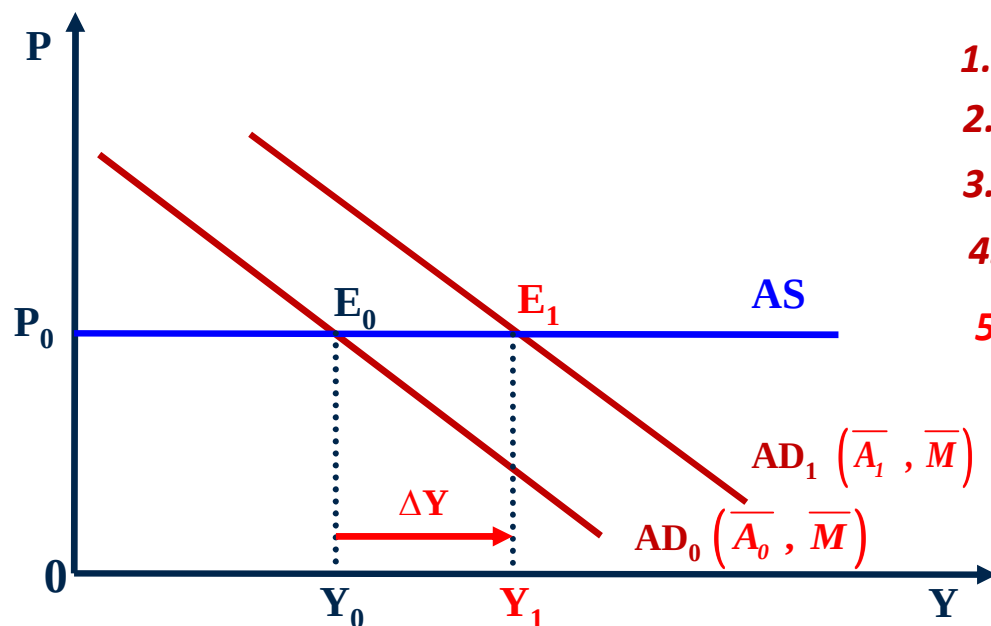
Premise: *MPN is constant*

Production function: $\Delta Y = MPN \cdot \Delta N$

$MPN = \Delta Y / \Delta N \rightarrow MPN = W/P = \Delta Y / \Delta N$

$P = W/MPN \rightarrow P = W \cdot \Delta N / \Delta Y$

Effects of fiscal expansion policy:



1. Production will increase to Y_1 , $\Delta Y = (Y_1 - Y_0)$
2. Price level will not change.
3. Change in real product: $\gamma \cdot \Delta \bar{A}$
4. Interest rate will increase.
5. Fiscal policy is fully effective.

References

1. MACH, M. Macroeconomics II for Engineering (Master) study, 1st and 2nd part. Slany: Melandrium 2001. ISBN 80-86175-18-9.
2. ŠTANCL, et al. Fundamentals of the theory of military-economic analysis. 1st ed. Brno: Monika Promotion, 2012. ISBN: 978-80-905384-0-5.
3. MAITAH, M. Macroeconomics in practice. 1st ed. Praha: Wolters Kluwer CR, 2010. ISBN 978-80-7375-560-1
4. WAWROSZ, P., HEISSLER, H., MACH, P. Facts in macroeconomics - professional texts, media reflection, practical analysis. Prague: Wolters Kluwer ČR, 2012. ISBN 978-80-7275-848-0.
5. OLEJNÍČEK, A. et al. Economic management in the ACR. 1st ed. Uherské Hradiště: LV. Print, 2012. ISBN 978-80-260-3277-9.
6. ROMER, D. Advanced Macroeconomics. 3rd edition. New York: McGraw-Hill/Irwin, 2006. 678 p. ISBN 978-0-07-287730-4.



INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ



List of tasks for students

Exercise „Aggregate demand and aggregate supply – Introduction to analysis“

1. Derive aggregate demand curve; indicate the nature of its equation and the slope and position.
2. Explain problems with situations of “deflationary impotence” and “liquidity trap”.
3. Discuss the effect of real money balances and its real use to regulate the economy.
4. Explain the general technical and economic foundations of aggregate labor supply and derive the classical aggregate supply curve.
5. Analyze the effects of fiscal and monetary policy provided the classical aggregate supply curve.
6. Explain the basic assumptions of Keynesian school to the concept of short run aggregate supply (extreme case).
7. Analyze the effects of fiscal and monetary policy provided the Keynesian aggregate supply curve in extreme case.



INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

