

Economics II

Inflation, Part I

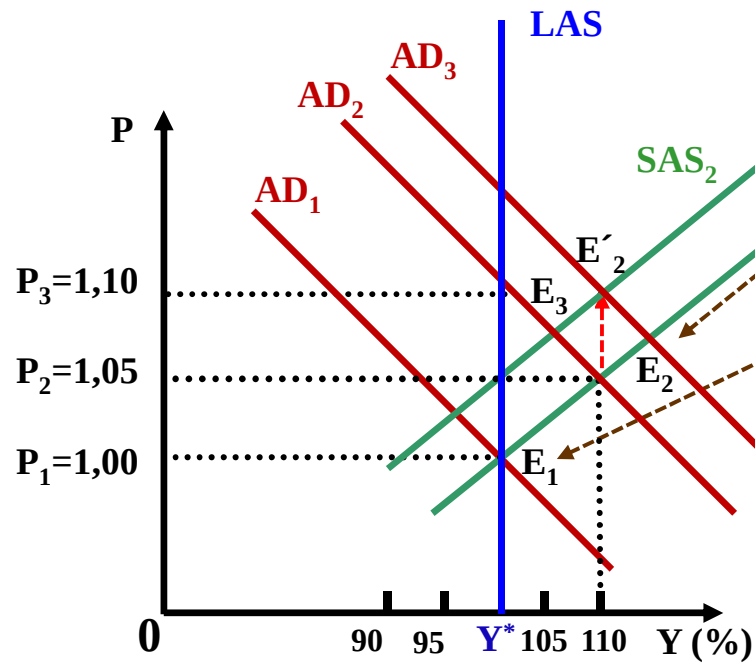
DEMAND-PULL INFLATION AND GROWTH OF REAL OUTPUT

The aim of the lecture is to deepen understanding of the nature and causes of inflation, respectively inflationary process whose source is the fault of the aggregate demand and explanation of the effects of inflation on changes in equilibrium production (income) assuming positively sloping aggregate supply curve in the short term.

Content:

- ❖ Introduction
- ❖ Inflation rate and output growth rate
- ❖ Inflation rate and nominal output growth rate
- ❖ Determination of inflation rate and real output growth rate: adaptation path
- ❖ Conclusion – summary, list of tasks for students

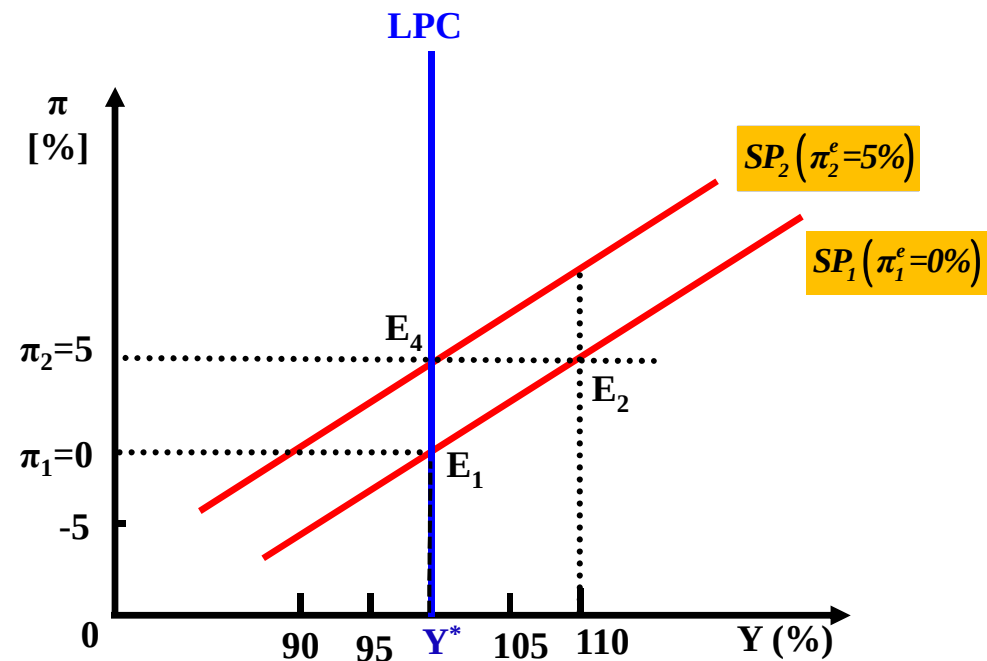
❖ Demand-pull inflation, SAS decrease



$$E_2: W_1/P_2 = 1,00/1,05 = 0,95$$

$$E_1: W_1/P_1 = 1,00/1,00 = 1,00 ; \pi_1^e = \pi_1 = 0$$

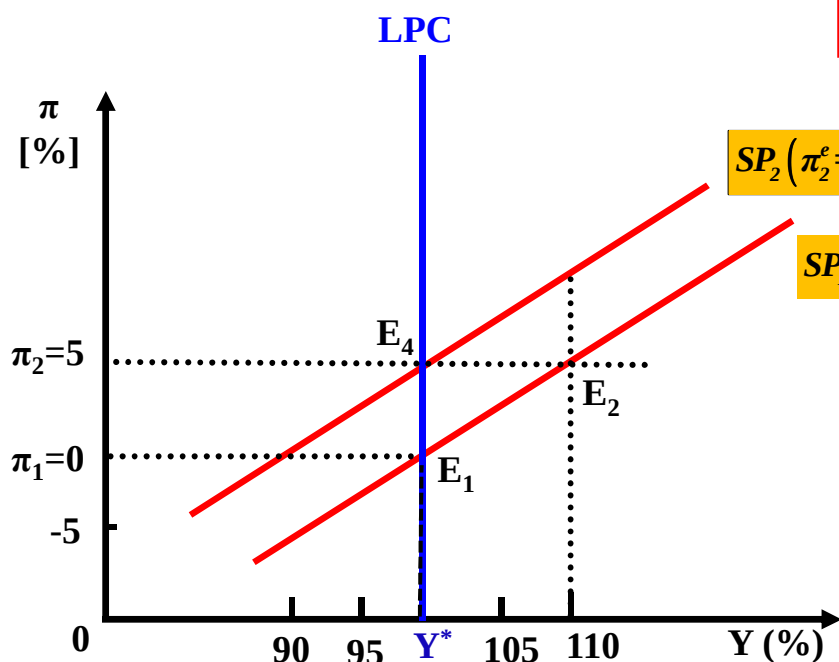
$$\pi_t = \frac{P_t - P_{t-1}}{P_{t-1}} = \frac{W_t - W_{t-1}}{W_{t-1}} - \frac{q_t - q_{t-1}}{q_{t-1}}$$



SP curve and long run Phillips curve

SP curve reflects such as combinations of output growth and inflation rates that are compatible with the expected rate of inflation (it is a reformulation of the DSAS curve).

$$SP \text{ curve: } \pi_t = \pi_t^e + g \cdot \hat{Y}_t + z_t$$



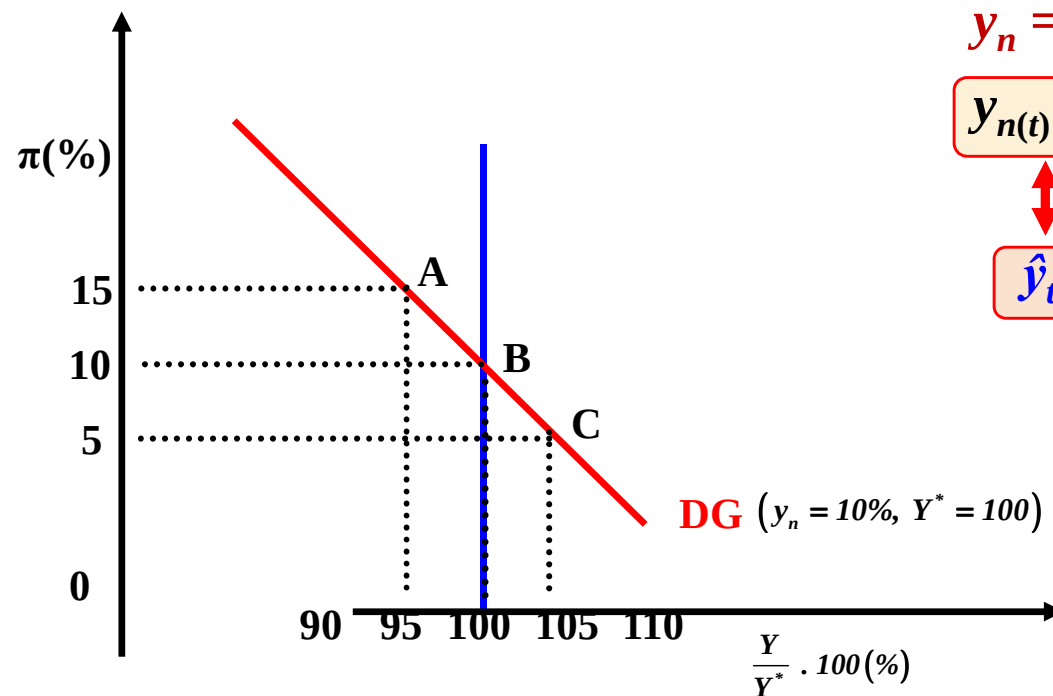
$g \dots \pi$ share growth in the period and changes in income in the period in %

$$\hat{Y}_t = [100 \cdot \ln(Y_t / Y^*)]$$

$z_t \dots$ cost-push inflation contribution

$$DSAS \dots \pi_t^e + 1/\delta (Y - Y^*) = SP \dots \pi_t^e - \varepsilon (u - u^*)$$

DG curve = dynamic aggregate demand curve (DAD)



$$y_n = \pi + y$$

$$y_{n(t)} - y^*_t = \pi_t + y_t - y^*_t$$

$$\hat{y}_t$$

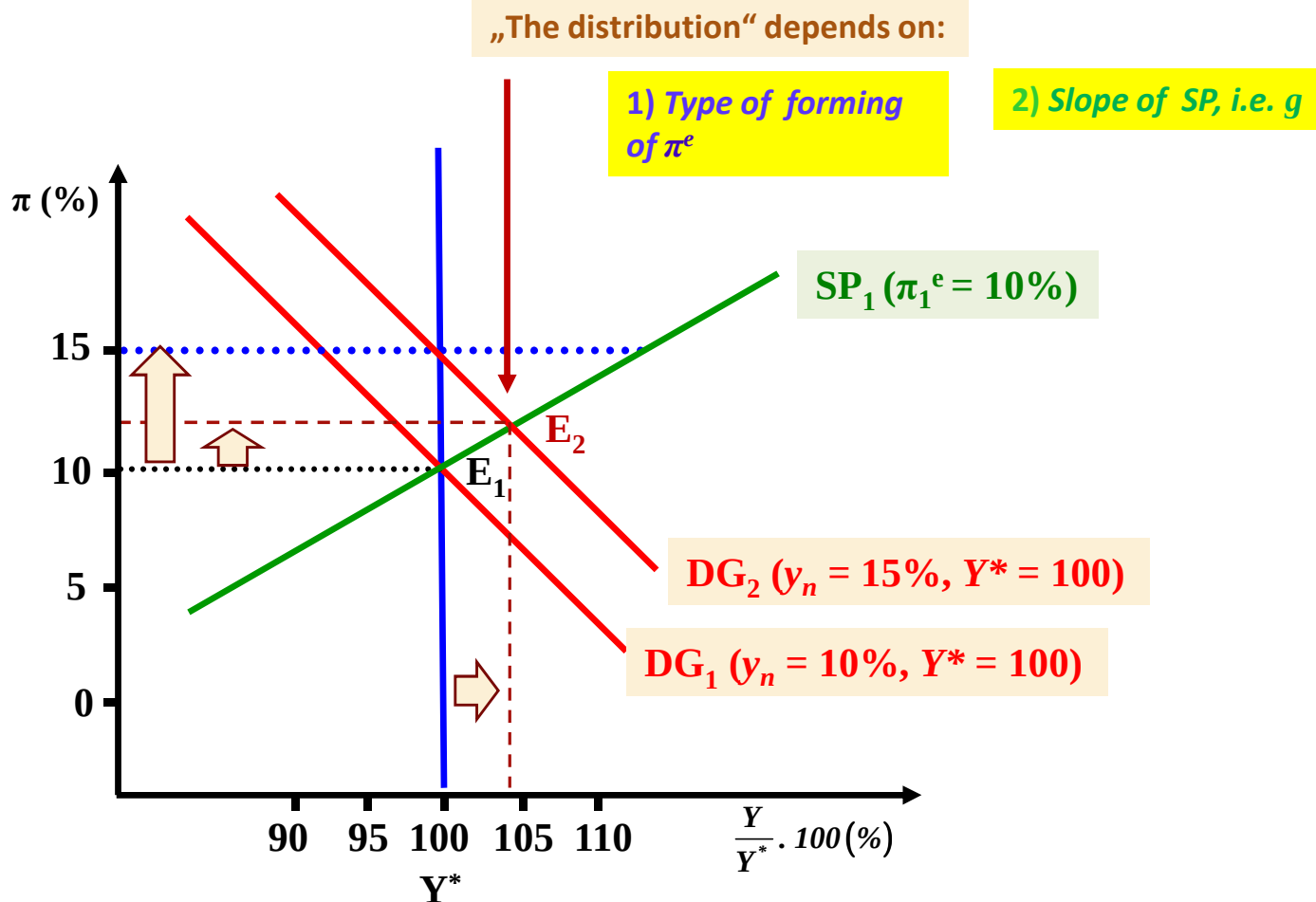
DG curve (line):

$$\hat{y}_t = \pi_t + \hat{Y}_t - \hat{Y}_{t-1}$$

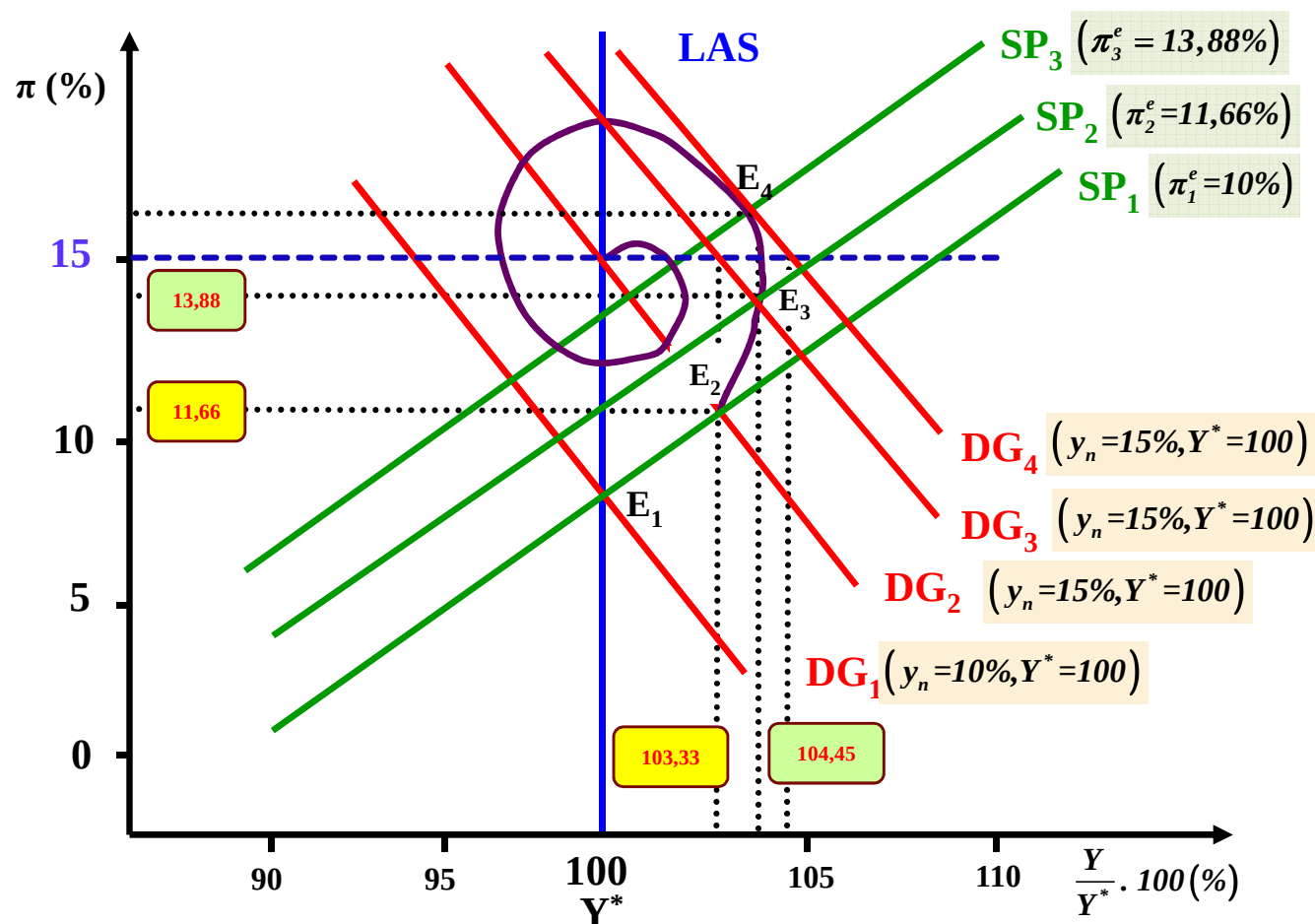
The growth curve of demand economics (DG) is a combination of inflation and the growth rate of real output (income) compatible with the growth rate of nominal output that is constant along the DG curve.

Determination of inflation rate and real output rate: Adaptation path

Solved problem: how the permanent increase in AD growth is "divided" into real output growth and inflation rate.

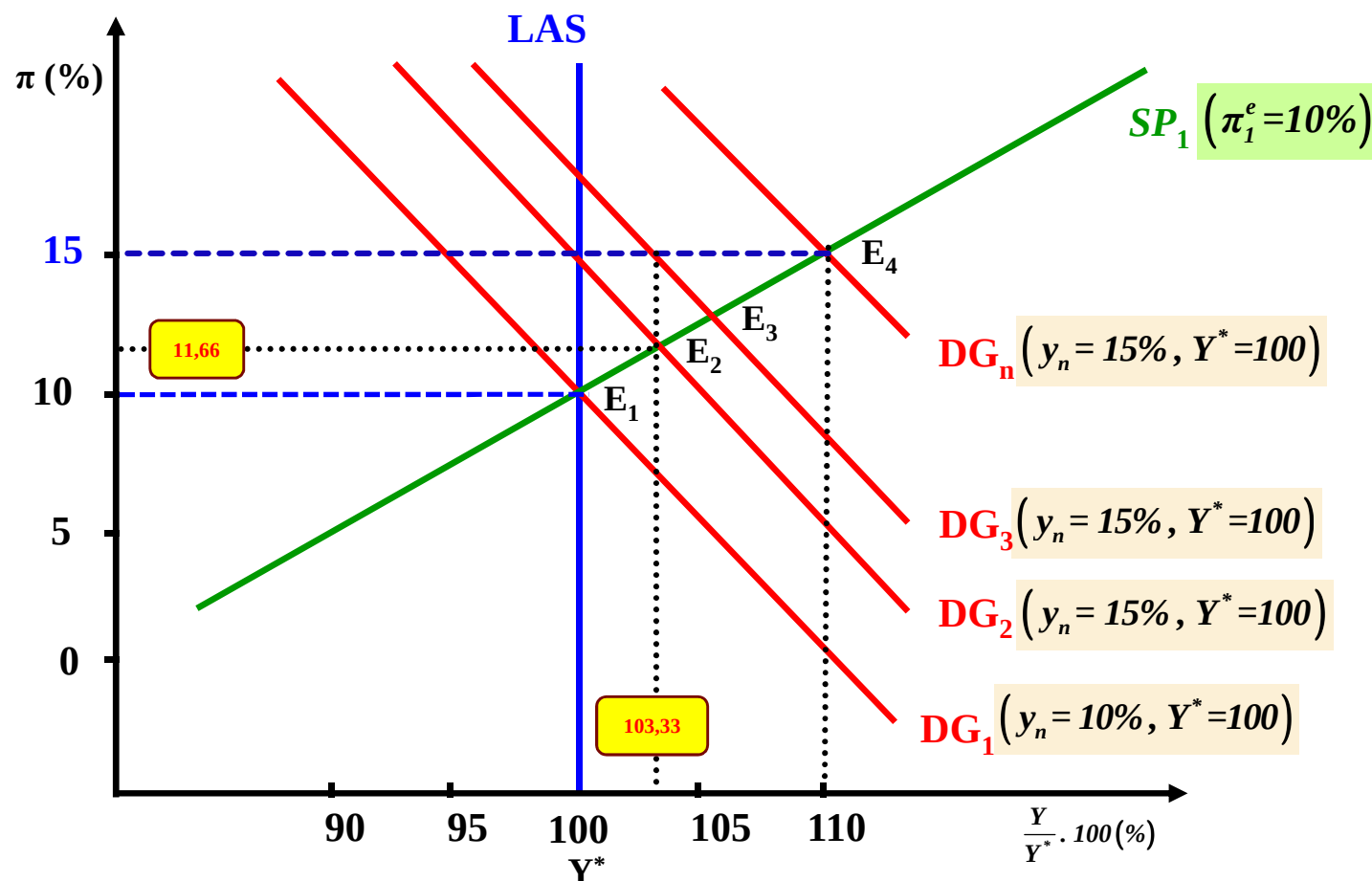


Adaptation path, the inflation rate and the rate of output growth in case of adaptive (static) method of forming expected inflation

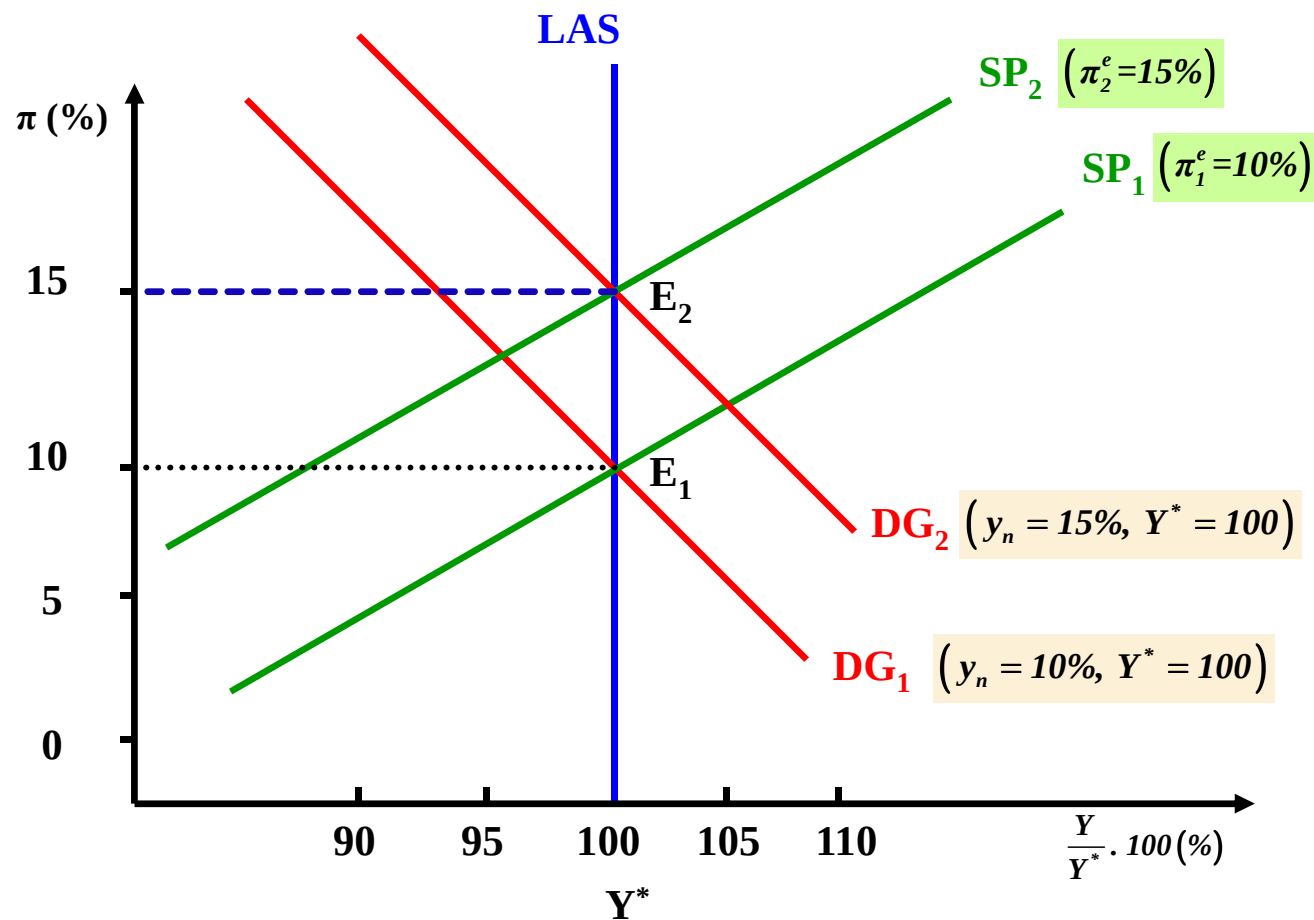


Conclusion: A permanent increase in the AD of adaptive (static) method of forming expected inflation increases actual production in a short run!

Adaptation path of inflation rate and the growth of production provided that the expected inflation rate is unchanged, i.e. $j = 0$



Adaptation path and rational expectations



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 “Demand-pull inflation and real output growth”

1. Explain the causes of demand-pull inflation and analyze the relationship between the growth rate of real income and inflation rate (SP curve).
2. Characterize the SP curve; explain the equation and correlation with long-term Phillips curve.
3. Characterize the DG curve and explain the equation of aggregate demand growth curve.
4. Explain the adaptation path, the inflation rate and the rate of output growth in case of adaptive (static) method of forming expected inflation.
5. Explain the adaptation path; the inflation rate and the growth rate of production, provided that the expected inflation rate does not change.
6. Discuss adaptation path based on rational expectations.