INVESTMENTS IN EDUCATION DEVELOPMENT

Course:

Economics II (macroeconomics)

Chapter 6

6.2 Inflation, Part II

Author: Ing. Vendula Hynková, Ph.D.

Introduction

The aim of this chapter is to deepen and develop knowledge of inflation, whose resources are on aggregate supply side, to clarify the effects of inflation and the possibilities (methods) of its treatment.

The growth of aggregate price level can also be generated by the aggregate supply – by negative supply shocks. Macroeconomic policy has basically three possible ways how to adverse these negative supply shocks (three responses). Analysis of inflation as a complex phenomenon includes explanation of each method of treatment (strategies).

1 Costs-push inflation

The main generators of cost occur in companies (so called negative supply shocks), they may be e.g.:

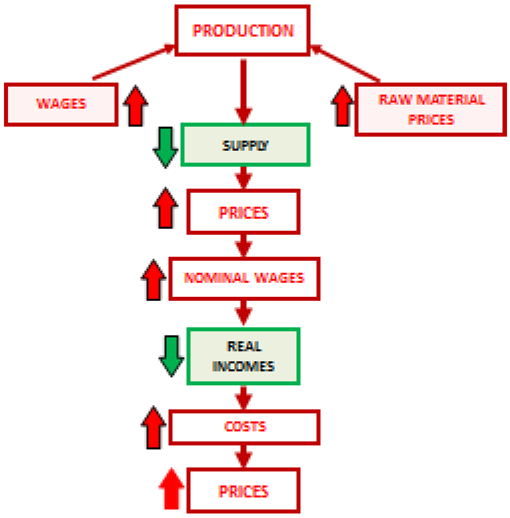
- faster growth in nominal wages than labor productivity growth;
- rising prices of energy and raw materials;
- rising prices of production factors other services;
- exchange rate depreciation, which increases the relative price of imported goods and services (and thus the aggregate price level);
- increase in the rate of taxation ("pushed inflation tax");
- efforts of the companies themselves raise the prices of their products and services.

We must point out that the distribution of inflation on the demand and supply inflation is only relative and conditional and applies only to the original generators that start inflation.

a) Negative supply shocks, supply-side inflation and real product

We will demonstrate the analysis of the problem due to the unfavorable supply shock as a generator of inflation on aggregate supply side and the macroeconomic effects on inflation and real output movement by the devaluation of the domestic currency (leading to an increase in the relative prices of imported goods and services - more expensive imports, and to increase the aggregate price level, see Fig. 6.2.1.

Fig. 6.2.1 Negative supply shocks – the mechanism



Types of macroeconomic policy reacting to a negative supply shock:

1) **neutral policy**; that keeps in response to adverse supply shock unchanged the growth rate of nominal output.

Neutral policy has resulted simultaneously increases in inflation and a decline in production represents a compromise - "a little inflation" a little "unemployment".

2) **accommodative policy**; that completely eliminates the effect of a negative shock to the invitation decline in production and increase in unemployment. This policy means that it is selected as the growth rate of nominal output, respectively aggregate demand, which completely suppresses the adverse effect of reduced production below potential output. The inflation rate in this policy will increase.

This policy has resulted in an increase in the inflation rate equals the size of the inflation effect and unchanged production levels.

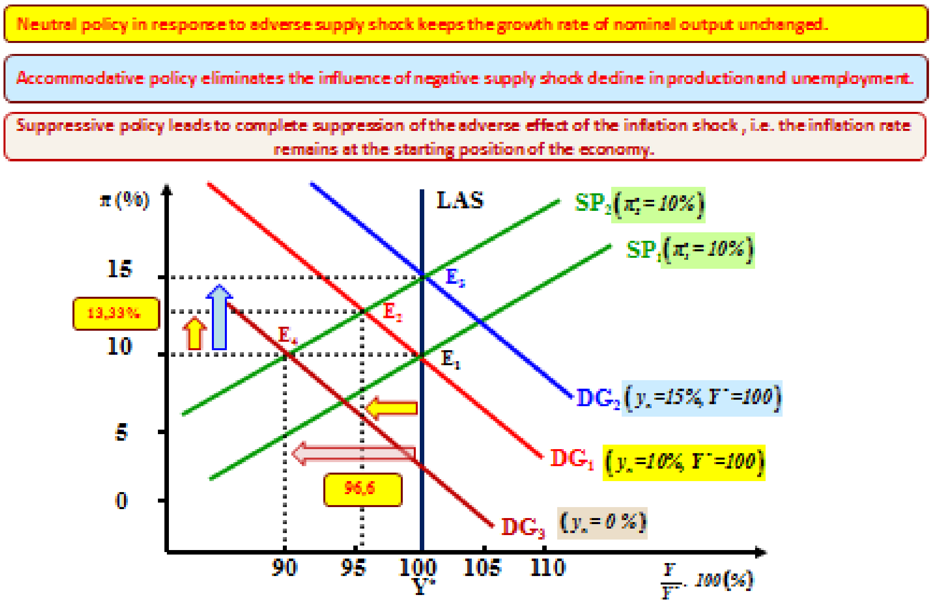
The crucial question for the application of these policies is whether inflation effect stakeholders perceive the economy as a permanent, permanent or only a temporary phenomenon.

In the first case (assuming that wages can adapt to the adverse effects of shock invitation and expected inflation rate for the next period this effect "involves") it threatens to permanent inflation process - the generator - putting into operation of automatic escalator wage rates and permanent increasing cost and price level.

3) **suppressive policy**; leading to complete suppression of the negative effect of the inflation shock invitation, i.e. the inflation rate remains at the starting position of the economy. This policy has resulted in reduction of aggregate demand growth rate, respectively the growth rate of nominal output and its lowering below the level of potential output and in a significant increase in unemployment.

The suppressive policy results in eliminating the negative effect of inflation at the expense of a short-term decline in production and employment.

Fig. 6.2.2 Macroeconomic policies reacting to a negative supply shock



b) positive supply shock, inflation rate and the rate of production growth

The effect of positive supply shocks is the inflation reduction. Positive supply shocks include:

- labor productivity is to wage growth,
- reduction in the relative prices of some goods and services, eg. due to exchange rate appreciation,
- reduction in the relative prices of some goods and services as a result of major technological breakthroughs that induce a significant increase in labor productivity, indirect taxes,
- control of prices and wages (their freezing) etc.

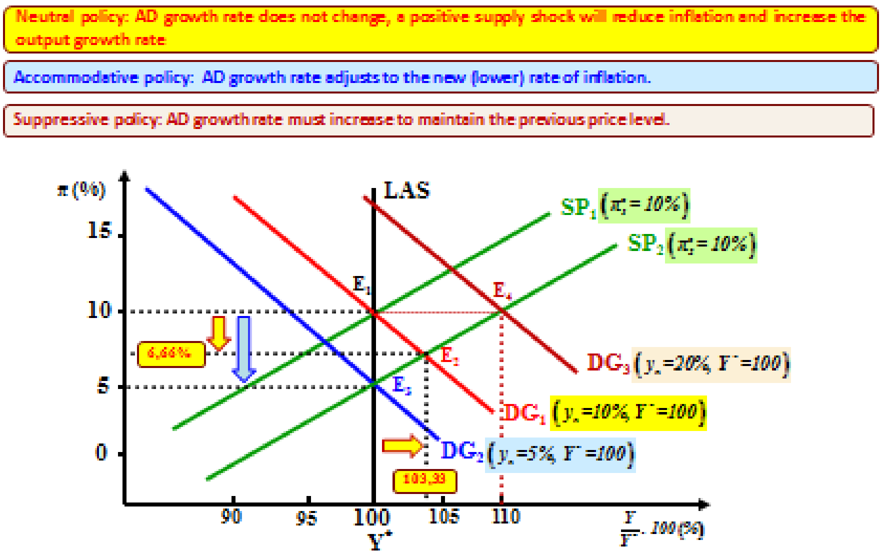
The effect of positive supply shock depends on the response of economic policy:

1) ***the neutral type of policy*** - the growth rate of aggregate demand remains unchanged and positive supply shock leads to a reduction in the rate of inflation and the rate of production growth;

2) ***the accommodative type of policy*** - the growth rate of aggregate demand adjusts to the new (lower) rate of inflation;

3) ***the suppressive type of policy*** - the growth rate of aggregate demand must be increased to maintain the initial price level.

Fig. 6.2.3 Macroeconomic policy reacting to a positive supply shock



2 Methods of inflation treatment

Disinflation = a decrease in the rate of inflation (it is necessary to distinguish the concept of deflation as a decrease in the general price level – a rare phenomenon);

a) treatment of demand-pull inflation

The disinflation requires:

- either reduce the growth rate of the money supply, i.e. to implement restrictive monetary policy;
- or reduce government spending, i.e. to implement a restrictive fiscal policy.

The starting point for further analysis - the process of treatment will be done by reducing the growth rate of aggregate demand (nominal output) by reducing the growth rate of the money supply, i.e. a restrictive monetary policy.

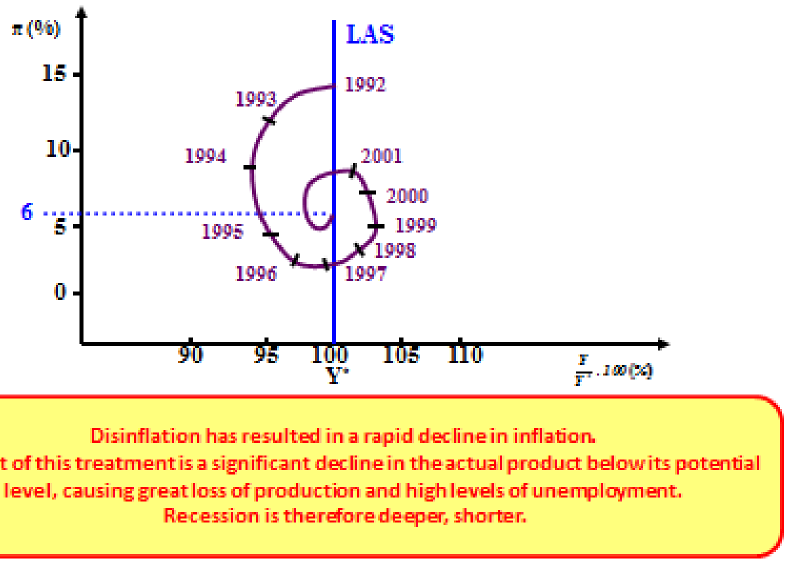
Methods of disinflation:

1) ***"cold turkey" method*** - the use of a significant and permanent reduction in the rate of growth of aggregate demand.

Using this method of treatment of inflation (disinflation) has resulted in a rapid decline in inflation. The cost of this treatment is a significant decline in the actual product below its potential level, large production losses and high unemployment.

The recession is deeper but shorter loans to the government and the public will expect that its policy will be a success, see Fig. 6.2.4.

Fig. 6.2.4 Cold turkey method



2) ***gradualist method*** – it is slow and gradual reduction in the rate of growth of aggregate demand, i.e. nominal product. The recession is moderate, but its duration is longer, the public may believe the government that its policy will be successful, though in the early years will reduce actual inflation is very small, and therefore may not lead to a reduction in expected inflation.

The cold turkey method has usually more credibility than a gradualist policy.

Comparison: cold turkey vs gradual method

Effects	Gradual method		„Cold turkey“ method	
Decrease in inflation rate	mild	long run	significant	short run
Decrease in production	mild	long run	significant	short run
Decrease in AD growth rate	mild	long run	significant	short run

Treatment of cost-push inflation

Treatment of cost-push inflation requires weakening or eliminating the causes of negative supply shocks and the government is expected to seek and implement positive supply shocks.

References and further reading:

MACH, M. *Macroeconomics II for Engineering (Master) study, 1st and 2nd part.* Slany: Melandrium 2001. ISBN 80-86175-18-9.

ŠTANCL, et al. *Fundamentals of the theory of military-economic analysis.* 1st ed. Brno: Monika Promotion, 2012. ISBN: 978-80-905384-0-5.

MAITAH, M. *Macroeconomics in practice.* 1st ed. Praha: Wolters Kluwer CR, 2010. ISBN 978-80-7375-560-1

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.

OLEJNÍČEK, A. et al. *Economic management in the ACR*. 1st ed. Uherské Hradiště: LV. Print, 2012. ISBN 978-80-260-3277-9.

ROMER, D. *Advanced Macroeconomics.* 3rd edition. New York: McGraw-Hill/Irwin, 2006. 678 p. ISBN 978-0-07-287730-4.