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Course:

Economics II (macroeconomics)

Chapter 2

2.2 The IS-LM Model. Fiscal and Monetary Policy

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Indroduction

The aim of this lecture is using the IS-LM model to explain the various aspects of the effectiveness of fiscal and monetary policies and their combinations, thus demonstrating the importance of the model as a tool for macroeconomic analysis.

The lecture is divided, with an introduction and conclusion, into three main parts. The first part is devoted to the analysis of the effectiveness of fiscal policy, the second part of the analysis, the effectiveness of monetary policy and the third part is devoted to the problem to find criteria for the choice of fiscal and monetary policies and their combinations.

1 Fiscal policy and its effectiveness

The fiscal policy is to change the equilibrium level of income (employment). In fiscal expansion, the aim is to increase the level of steady income and reduce unemployment, fiscal austerity when the opposite is true. Its aim is to hinder the "overheated" economic growth, hampering inflationary processes induced by excessive aggregate demand, reduce the budget deficit, etc.

Fiscal expansion will mean a change (increase) of at least one of the following components:

- increase in government purchases of goods and services;

- an increase in transfer payments;

- reduction of autonomous taxes;

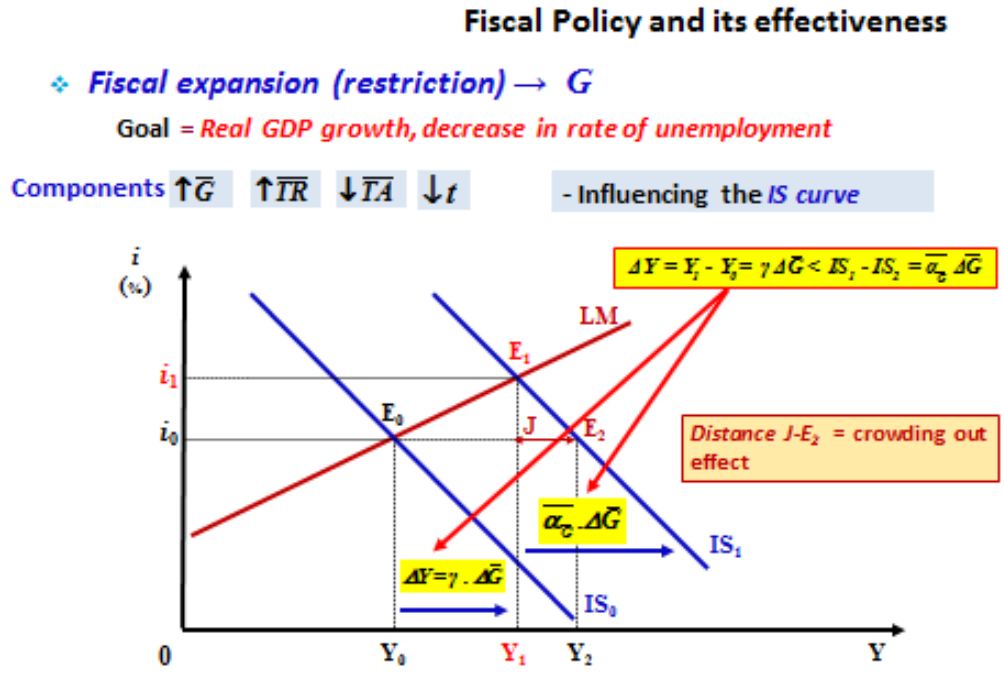
- a decrease in income tax.

Note the assumptions of analysis:

The analysis will be performed on an example of fiscal expansion, causing a change of conditions that condenses IS curve, i.e. shifts to the right in this case and up. At the same time, we assume that the conditions do not change, which condenses the LM curve, i.e. we will consider the pure fiscal expansion.

Crowding-out effect when increasing G – government spending (see Fig. 2.2.1 below, the distance J-E_2).

Fig. 2.2.1 Fiscal expansion and crowding-out effect



The size of the crowding-out effect (full, partial, zero) is dependent on the slope of the curves IS and LM.

a) when the LM curve is horizontal,

b) when vertical LM curve,

c) the effectiveness of the impact of fiscal expansion reduces the high sensitivity of money demand to income, which increases the demand for money and the interest rate needed to "clean" money market (assets) and thus leads to more intense crowding out private investment and to reduce the effectiveness of fiscal expansion.

d) the effectiveness of fiscal expansion also affects the slope of the curve IS: the flatter the IS curve, i.e. the greater the sensitivity of demand for autonomous expenditure rate (the larger the *b*), the lower the effect of fiscal expansion. Conversely: efficacy fiscal expansion is greater, the steeper the curve IS and therefore the smaller the *b* parameter.

Partial crowding leads to changes in the structure of expenditure, to reduce the weight of private autonomous expenditures and increase in the weight of public expenditure autonomous or even induced to increase the share of consumption.

Crowding and fiscal policy in the case of the so-called "liquidity trap" and called the situation "classical case", i.e. two extreme and probably unrealistic economic situations.

Fig. 2.2.2 Fiscal expansion and crowding-out effect in terms of vertical LM curve

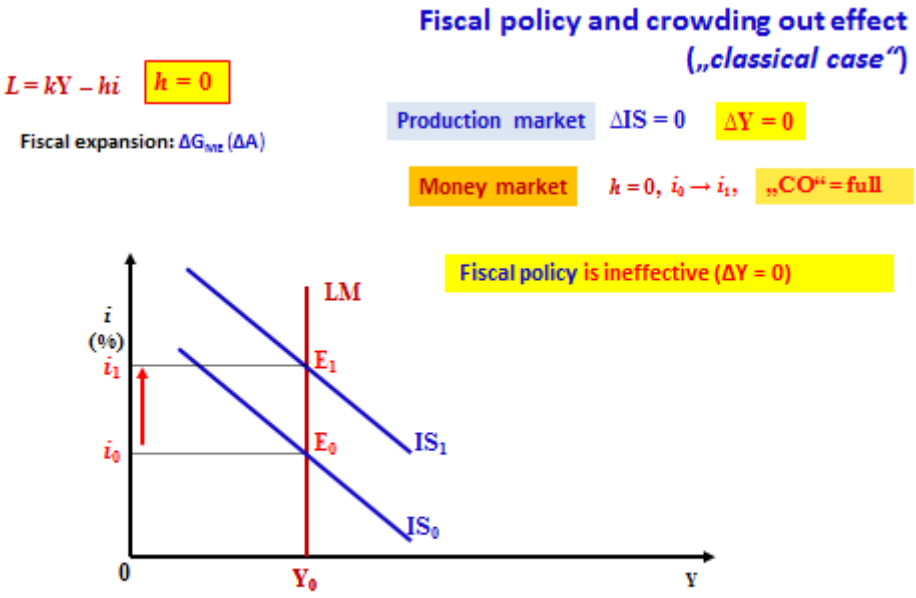
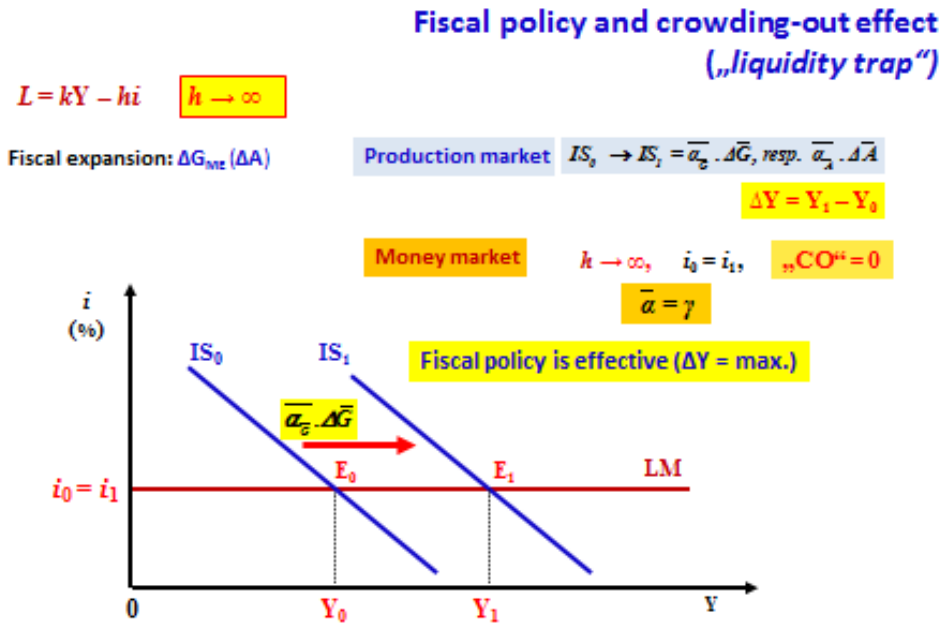


Fig. 2.2.3 Fiscal expansion and crowding-out effect in terms of horizontal LM curve



2 Monetary policy and its effectiveness

Monetary policy by the central bank, which controls through nominal stock of money (money supply) or the movement of interest rates affects macroeconomic performance, respectively equilibrium level of income, employment, inflation and balance of payments.

Monetary policy tools - recall and deepen their knowledge of the course in Economics I.

Monetary policy can have:

a) an expansive character,

b) a restrictive character.

Two effects of pure monetary expansion:

a) income effect - due to monetary expansion increases the equilibrium level of income;

b) the effect of liquidity - due to monetary expansion decreases the interest rate.

The effectiveness of monetary policy is determined by LM slope of the curve and slope of the curve IS:

a) the effectiveness of monetary policy is greater, the steeper the LM curve, i.e. the lower the sensitivity of money demand to the interest rate. The maximum effect of monetary expansion is when sensitivity is equal zero, i.e. money demand is completely insensitive to interest rate. LM curve is vertical then. In this case, the situation is called a "classic case".

b) the effectiveness of monetary policy is lower, the higher the sensitivity of money demand to the interest rate, and thus, the flatter the LM curve. Monetary expansion has zero effect when the high sensitivity of money demand i.e. is approaching infinity and the LM curve is horizontal. In this case, the situation is called a "liquidity trap". (to analyze graphically)

c) Efficiency of monetary expansion is greater, the flatter the IS curve, i.e. the higher the sensitivity of autonomous expenditure rate (b) and the higher expenditure multiplier (α) and vice versa.

Keynesian transmission mechanism of monetary expansion, respectively called Keynes effect, describes the conditions of the mechanism connection between money and output as follows:

1. Increase supply of real money balances conducted by the central bank must lead to a change in the structure of the portfolio and the public must manifest itself by lowering interest rates (yields) of alternative assets.

2. Changing interest rates must be significant to lead to an increase in interest-sensitive components autonomous expenditures and thus aggregate demand.

3. Increase in aggregate demand should lead to an increase in the level of equilibrium production.

If any of these conditions are not met the connection between money and production is interrupted.

3 Selecting goals by the central bank (the nominal money supply or interest rate)

The choice of targets, which will monitor the central bank depends on which of these objectives - the money supply or interest rate - is it better to influence the equilibrium level of production and reducing its fluctuations.

The problem can be analyzed through two situations:

a) LM curve is stable and IS curve is unstable;

b) the LM curve is unstable and IS curve is stable.

Generally, policy-makers rather prefer smaller fluctuations in output and employment, and therefore in terms of:

a) when the IS curve unstable, respectively less stable, than the LM curve is smaller fluctuations in output and employment reached at target tracking "desirable money supply";

b) when the LM curve is unstable, respectively less stable, than the IS curve is more appropriate objective of monetary policy to maintain the desired level of interest rates.

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