

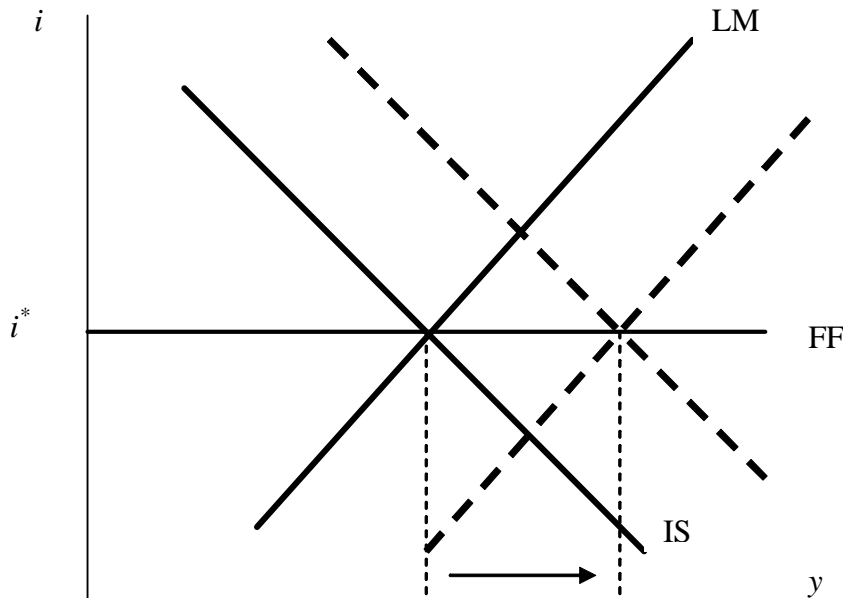
Econ 8510/Chatterjee
 Assignment 2
 Solution for Question2

Question 2

i. A fiscal policy shock in the Mundell-Fleming Model:

(a) *Fixed Exchange Rate Regime*: The increase in government expenditure shifts the IS curve to the right, directly affecting expenditures. The higher expenditures tend to exert an upward pressure on the domestic interest rate, which causes an incipient capital inflow into the economy. As a result, the LM curve shifts to the right as well. In the new equilibrium, output increases. Fiscal policy, therefore, is an effective tool of stabilization under fixed exchange rates, contrary to monetary policy.

$$\frac{dy}{dg} = \frac{1}{1-\gamma} > 0, \quad \frac{dm}{dg} = \frac{\phi}{1-\gamma} > 0$$

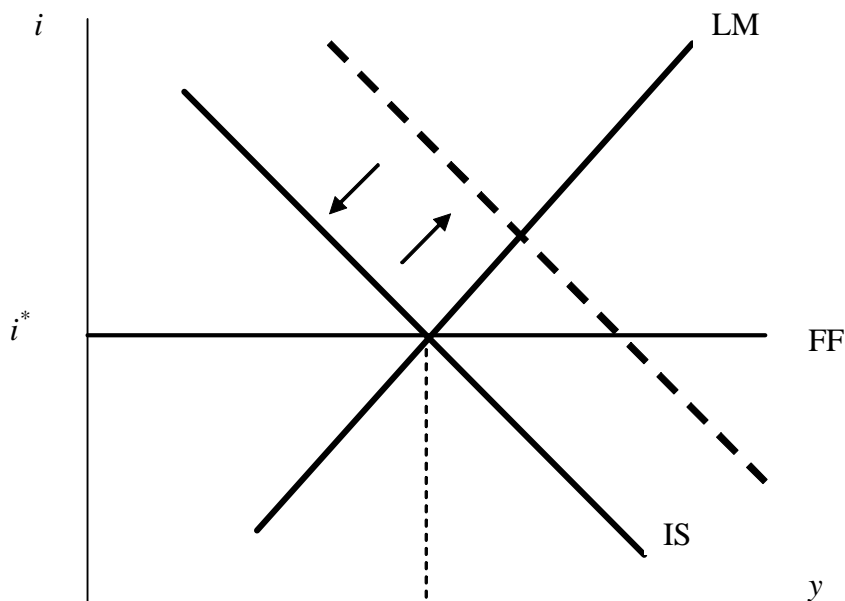


(b) *Flexible Exchange Rate Regime*: Under flexible exchange rates, fiscal policy becomes ineffective as a stabilization tool. An expansion of government spending is represented by an initial outward shift of the IS curve, which leads to an incipient capital inflow (due to the

upward pressure on domestic interest rates) and an appreciation of the home currency:

$$\frac{ds}{dg} = -\frac{1}{\delta} < 0$$

The resulting expenditure switch forces a subsequent inward shift of the IS curve. The contractionary effects of the induced appreciation offset the expansionary effect of the government spending, leaving output unchanged, i.e., $dy = 0$. Again, this contrasts with the effects of monetary policy under flexible exchange rates, where such a policy can be used as an effective stabilization tool.



ii. A fiscal shock in the Dornbusch Model

The long-run equilibrium in the Dornbusch model is given by

$$\bar{i} = i^*$$

$$\bar{p} = m - \phi y + \lambda i^*$$

$$\bar{s} = \bar{p} + \frac{1}{\delta} [(1 - \gamma)y + \sigma i^* - g]$$

Differentiating the long-run equilibrium with respect to g yields

$$\frac{d\bar{s}}{dg} = -\frac{1}{\delta} < 0$$

A permanent increase in government expenditure leads to a long-run appreciation of the nominal exchange rate, reflecting the result obtained for the Mundell-Fleming model. To check whether this change leads to any transitional adjustment of the exchange rate, differentiate the short-run money market equilibrium condition $m - p = \phi y - \lambda i$ with respect to g . This gives $di/dg = 0$, since m is exogenous and p and y are fixed. Then, consider the UIP condition

$$i = i^* + \theta(\bar{s} - s)$$

Differentiating with respect to g yields

$$\frac{di}{dg} = \theta\left(\frac{d\bar{s}}{dg} - \frac{ds}{dg}\right)$$

Since $di/dg = 0$, this gives

$$\frac{d\bar{s}}{dg} = \frac{ds}{dg} = -\frac{1}{\delta}$$

Therefore, the nominal exchange rate jumps down instantaneously to its long-run equilibrium. Consequently, there is no transitional dynamics (over-shooting or under-shooting) of the nominal exchange rate. This happens because of the expenditure-switching effect of the government expenditure shock: it completely crowds out domestic private spending to maintain goods market equilibrium.