Practice Problems: IS/LM Model

Econ520. Fall 2022. Prof. Lutz Hendricks. August 17, 2022

You should be able to work through the effects of shocks in the IS/LM model

- graphically
- verbally, providing the sequence of events and intuition for the outcomes

1 Interest elasticity of investment

Suppose that investment becomes more responsive to interest rates. That is, the parameter b_1 in $I = \bar{I} - b_1 i$ increases.

1. How does this affect the IS curve?
2. Does this make monetary policy more or less effective?
3. Does this make fiscal policy more or less effective? Explain the intuition.

1.1 Answer

1. IS becomes flatter. The easiest way to work this out is a linear model.
2. A given shift in M/P has a larger effect on output. Intuition: a small drop in i produces a big rise in demand. That clears the money market. With low interest elasticity of I: the

same demand stimulus would require a larger drop in i, but then there would be excess demand for money.

3. A given shift in G has a smaller effect on output. Intuition: Increasing Y requires higher i (along LM). That crowds out investment.

2 Interest elasticity of money demand

Suppose that money demand becomes more responsive to interest rates. That is, $L'(i)$ increases in the money demand function $YL(i)$.

1. How does this affect the LM curve?
2. Does this make monetary policy more or less effective?
3. Does this make fiscal policy more or less effective? Explain the intuition.
4. What happens when the LM curve is vertical?

2.1 Answer

1. LM becomes flatter: a given change in i must be offset by a big change in Y.
2. A given shift in M/P has a small effect on Y.
3. A given shift in G has a large effect on Y.
4. With vertical LM: $L(i) = \bar{L}$ so that LM becomes $M/P = Y\bar{L}$, which determines Y independently of IS.