

Manual for IS-Curve Simulation

Carsten Lange, California State Polytechnic University, Pomona

www.csupomona.edu/~clange

Initially, when the simulation starts, the goods market is in equilibrium. Income/production (Y) equals the equilibrium income Y^* and therefore aggregated demand (Y^{dem}) equals income/production (Y). Let us assume that the government wants to stimulate the economy and increases government expenditures from 200 to 300 (please change G^{aut} accordingly). Consequently, Y^{dem} will increase by 100 and $Y^{dem} > Y$. Since the IS model assumes underemployment the firms will most likely respond to an excess demand with an increase in production. Note that possible price changes are not considered in the IS model which seems reasonable for such a basic model especially considering that there is plenty of unused production capacity when underemployment is high.

If you increase Y by 100 you might think that now after production increased the gap between demand and supply is closed. Try it out and don't forget to click the button. What you see is that demand increased again – now by 80. Why? The answer is in the consumption function. When production increased by 100 so did income. If income increases by 100 then consumption will increase by 80 (because the marginal propensity to consume (c) is 0.8). The increase in consumption will increase demand and results in a situation where demand increases by 80 and now again is bigger than production (supply).

Increase production again to close the demand gap (now by 80) and click . Consumption will increase again so will demand. Keep closing the gaps and you will see that eventually production and demand will be equal (or at least asymptotically equal).

Bottom line – an increase of government expenditures led to an increase of income that was 5-times bigger (income and production increased by 500). This is called the multiplier effect.

Try other economic policies such as stimulating investment (increase I^{aut}) or stimulating consumption (increase C^{aut} or c or both).

Enjoy the IS-Curve simulation.