Long-Run Consequences of Stabilization Policies

AP Macroeconomics

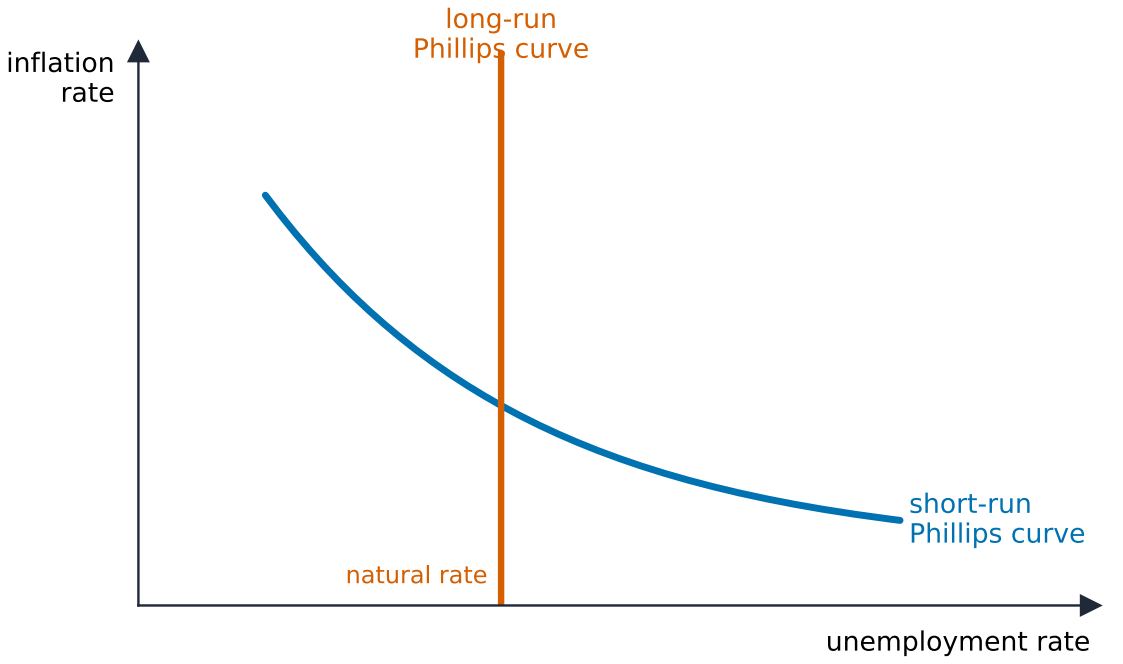
Fiscal and Monetary Policy in the Short Run

A parliament building: governments use spending and taxes as fiscal policy tools

Both policies work by shifting **AD** in the short run. **Fiscal policy** changes government spending or taxes; **monetary policy** changes the money supply and thus the interest rate. They can work **together** (both expansionary to fight a deep recession) or be **mixed** (e.g. loose fiscal + tight monetary). In the short run, expansionary policy raises output and the price level and lowers unemployment; contractionary policy does the reverse.

The Phillips Curve

The **Phillips curve** shows the short-run trade-off between **inflation** and **unemployment**:



The short-run and long-run Phillips curves

- The **short-run Phillips curve (SRPC)** slopes **downward** – lower unemployment comes with higher inflation. It is the mirror image of AD-AS: a rightward AD shift moves the economy up-left along the SRPC (less unemployment, more inflation).
- The **long-run Phillips curve (LRPC)** is **vertical** at the **natural rate of unemployment** – the counterpart of vertical LRAS. In the long run there is **no** trade-off: policy changes inflation, not unemployment.
- A **supply shock** shifts the SRPC (a negative shock moves it right – worse inflation *and* unemployment, i.e. stagflation). A change in **expected inflation** also shifts the SRPC.

Exam skill: link the AD-AS and Phillips graphs – a recessionary gap in AD-AS corresponds to a point on the SRPC to the **right** of the natural rate; know what shifts SRPC versus moves along it.

Money Growth and Inflation

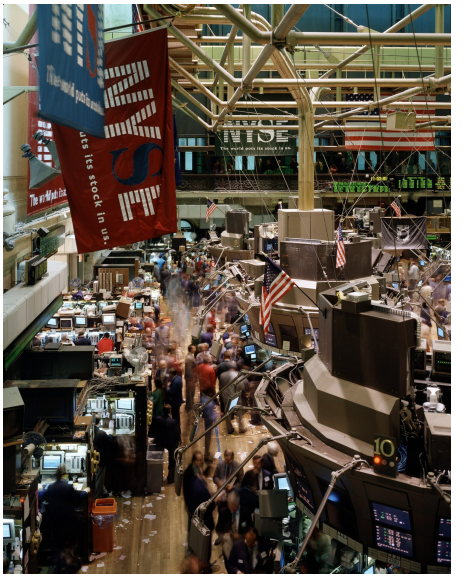
In the long run, **inflation is a monetary phenomenon**. The **quantity theory of money** states $M \times V = P \times Y$ (money supply $\times$ velocity $=$ price level $\times$ real output). With velocity V and real output Y roughly stable in the long run, growth in the **money supply** translates almost one-for-one into **inflation**. Printing money faster than the economy grows raises the price level, not real output – the root of high inflation and, in the extreme, **hyperinflation** .

Worked example. Suppose the money supply grows 8% per year while real output Y grows 3% and velocity V is stable. Rearranging $M \times V = P \times Y$ into growth rates, inflation $\approx 8\% - 3\% = 5\%$. The 5% of money growth not matched by extra output simply becomes higher prices.

More money chasing goods: sustained money growth tends to raise the price level over time

Government Deficits and the National Debt

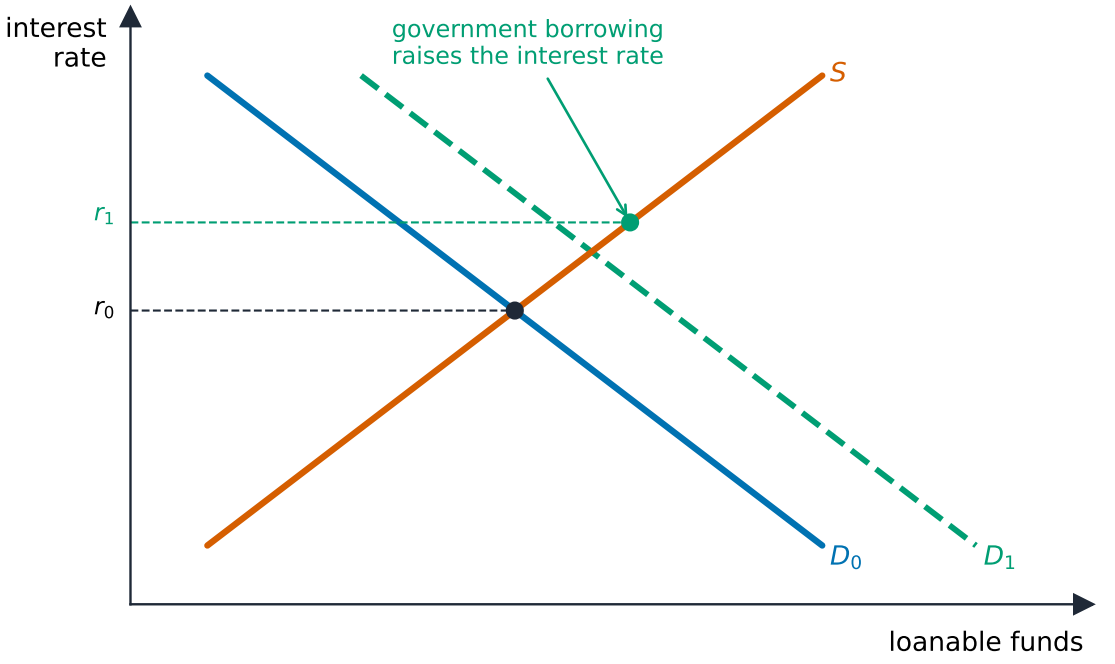
A **budget deficit** occurs when government spending exceeds tax revenue in a year (a **surplus** is the reverse). The accumulated total of past deficits is the **national debt** . Deficits are financed by **borrowing** – selling government bonds – which adds to the debt and to future interest payments. Persistent deficits raise concerns about crowding out and the burden of servicing the debt.



Bond and equity markets: government borrowing competes for loanable funds and can crowd out private investment

Crowding Out

Crowding out is the main long-run cost of deficit-financed fiscal policy. When the government borrows heavily, it increases the **demand for loanable funds**, raising the **real interest rate**. Higher rates **reduce private investment** (and interest-sensitive consumption). So expansionary fiscal policy partly cancels itself: the AD boost is offset by weaker investment. Worse, less investment today means a smaller capital stock and **slower long-run growth**.



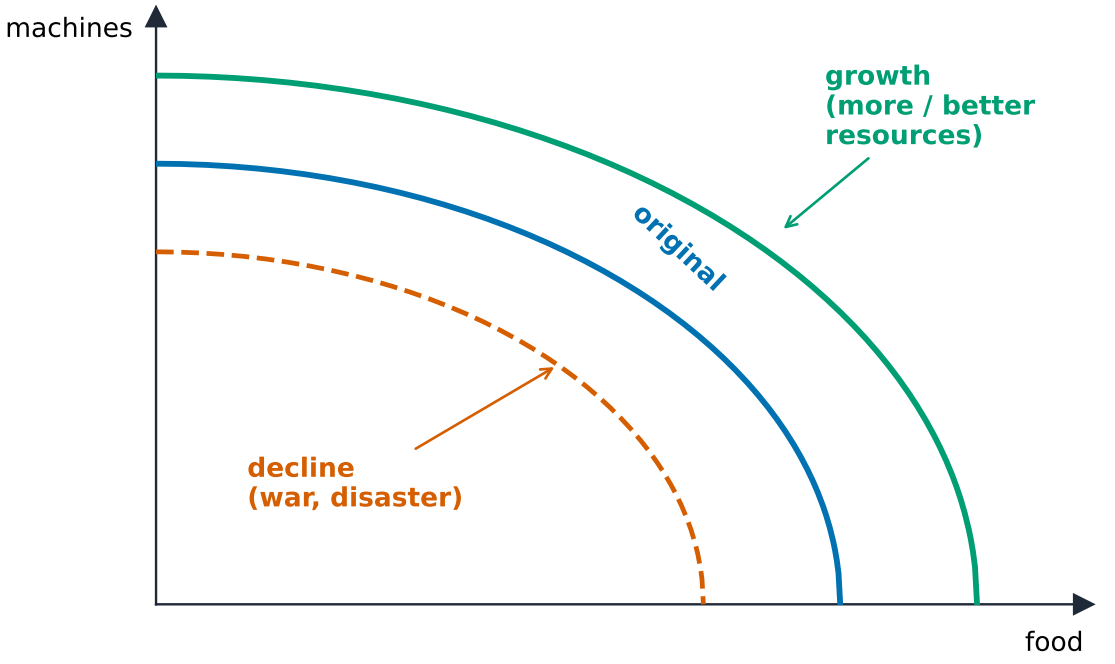
Government borrowing raises interest rates and crowds out private investment

Exam skill: show crowding out on the **loanable funds** graph – government borrowing shifts demand right, the real interest rate rises, and private investment falls.

> **Worked example.** A government borrows $500 billion to finance a deficit. On the loanable funds market this shifts the demand for funds right, pushing the real interest rate up (say from 3% to 4%). At the higher rate firms scale back investment – perhaps by $150 billion – so the net boost to AD is smaller than the $500 billion, and the lost investment slows long-run growth.

Economic Growth

Economic growth is a sustained rise in **real GDP per capita** – the true source of higher living standards. It comes from more or better resources and is shown as a **rightward shift of LRAS** (and an outward shift of the PPC). Its main drivers:



Economic growth shifts the production possibilities curve outward

- **physical capital** (more tools and machines per worker),
- **human capital** (education, skills, health),
- **technology** and innovation,
- **productivity** (output per worker) growth, the deepest driver.

Public Policy and Economic Growth

A wind farm: public investment in capital can raise long-run economic growth

Governments can raise long-run growth by policies that build capital and productivity: **investment in infrastructure and education**, **research and development** incentives, protecting **property rights** and the rule of law, encouraging **saving and investment** (which finances capital), and keeping inflation low and stable. The recurring long-run theme: policies that **crowd out** or discourage investment slow growth, while those that **encourage** capital formation speed it up.

Exam tips

- The short-run **Phillips curve** shows the inflation–unemployment trade-off; the long-run curve is **vertical** at the natural rate.
- In the long run inflation is a **monetary** phenomenon (money growth beyond output growth → inflation).
- Show **crowding out** on the loanable-funds graph: government borrowing raises the real rate and cuts private investment.
- Growth comes from more/better resources – physical capital, human capital, technology – shifting LRAS right.
- A supply shock moves inflation and unemployment the same way (stagflation), unlike a demand shock.