

Effects of Monetary Policy and Soft Landing

Pascal Michailat

<https://www.pascalmichailat.org/t5.html>

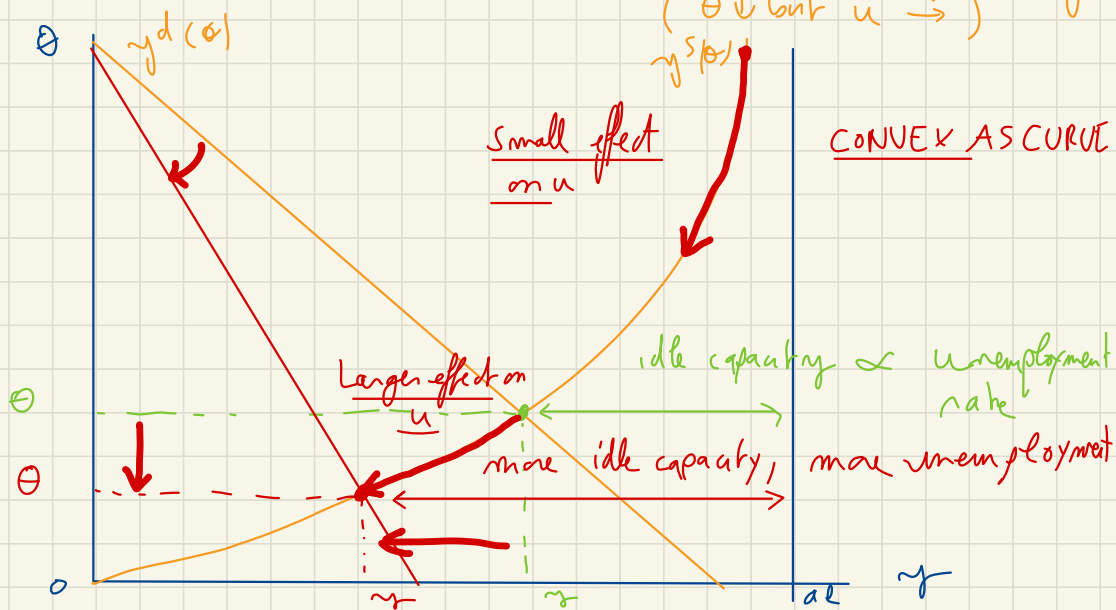


Monetary policy operates through the AD curve

$$y^d(\theta) = \left[\frac{\zeta - i + \pi}{\sigma'(0)} \right]^\zeta \frac{1}{[1 + \ell(\theta)]^{\zeta-1}}$$

Monetary policy tightens $i \uparrow$ so AD curve is depressed -

- Tightness $\Theta \downarrow$
- Output $y \downarrow$
- Employment $l \downarrow$
- unemployment rate $u \uparrow$: not possible to have a strict soft landing ($\Theta \downarrow$ but $u \rightarrow$)



A "loose" soft landing is possible b/c AS curve is convex, so increase in u is small when θ is high.

job separation rate = 3%

$$u = \frac{\lambda}{\lambda + f(\theta)} \quad \text{where } f(\theta) = \mu \cdot \theta^{1-\eta}$$

matching elasticity = 0.5

job-finding rate = 50%

Compute elasticity of u wrt θ :

$$\frac{d \ln u}{d \ln \theta} = - \frac{f(\theta)}{\lambda + f(\theta)} \cdot \frac{d \ln f}{d \ln \theta} = -(1-u)(1-\eta)$$

$$\frac{d \ln u}{d \ln \theta} = -(1-u)(1-\eta)$$

$$u \approx 4\%$$

$$\eta \approx 0.5 \quad (\text{Petrongola \& Pissaride, 2001})$$

$$\frac{d \ln u}{d \ln \theta} \approx -0.96 \times 0.5 \approx 0.5$$

So if Fed wants to bring θ from 2 to 1:

- θ falls by 50%

- u increases by $50\% \times 0.5 = 25\%$

- $\Rightarrow u$ increases from 4% to $1.25 \times 4\% = 5\%$

today

pre-pandemic
+ efficient