

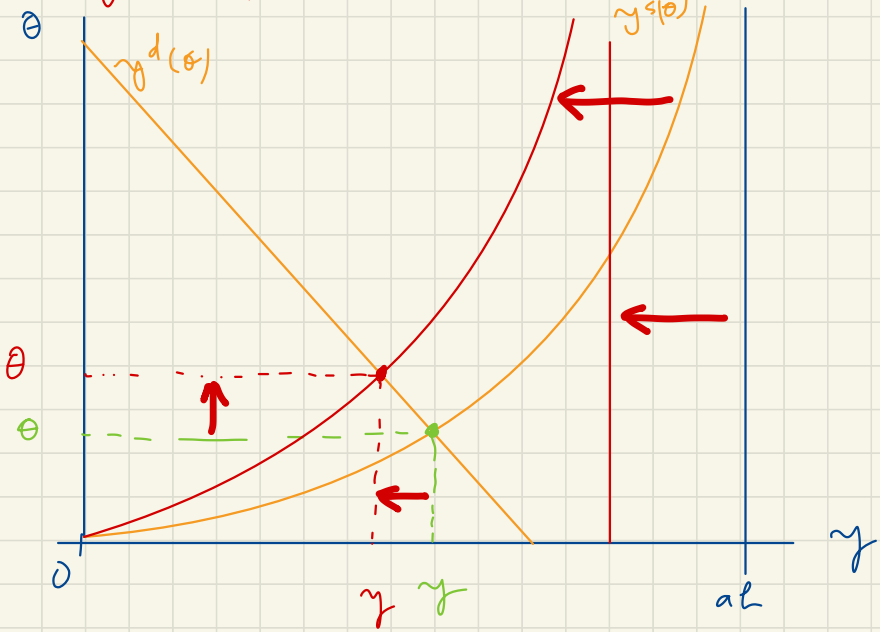
Aggregate Supply Shocks with Fixed Inflation

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<https://pascalmichailat.org/c2/>

Negative AS shock:

$$y^s(\theta) = \frac{y(\theta)}{1+f(\theta)} \cdot a \cdot \underline{h}$$

Lower labor-force participation: lower h



After reduction in labor force h

tightness:

θ	\uparrow
y	\downarrow

different from AD shocks

output

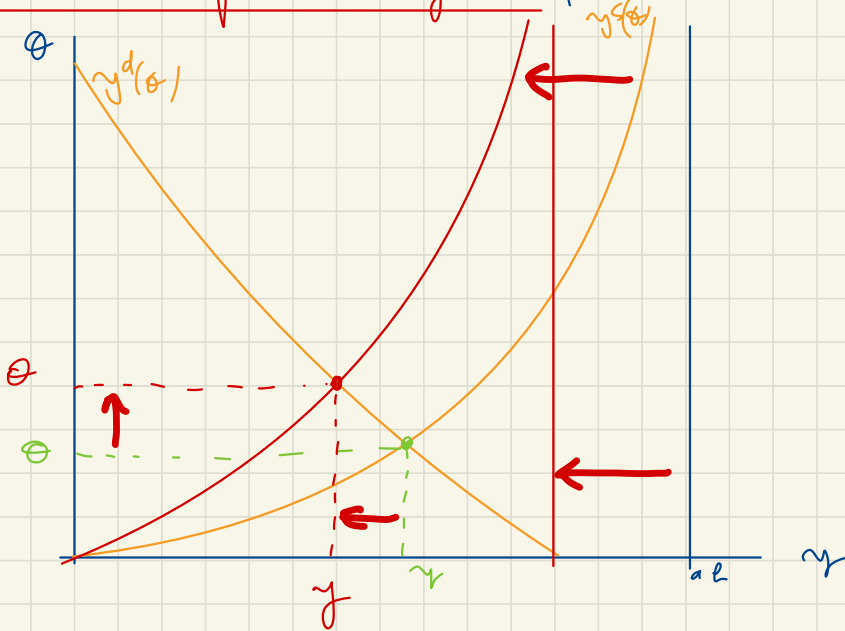
employment:

$l = y/a$ so $l \downarrow$

unemployment rate:

$u = \frac{\lambda}{\lambda + f(\theta)}$ so $u \downarrow$

Lower labor productivity a (another AS shock)



Lower labor productivity a

Tightness

a ↑

Output

y ↓

Unemployment rate

$$u = \frac{1}{1 + \beta a} \text{ so } u \downarrow$$

Employment

$$l = (1 - u) \times h$$

so $l \uparrow$

specific to productivity shocks

Evidence that $l \downarrow$ when $a \uparrow$. Basu et al (2006)