Aggregate Demand Shocks with Fixed Prices

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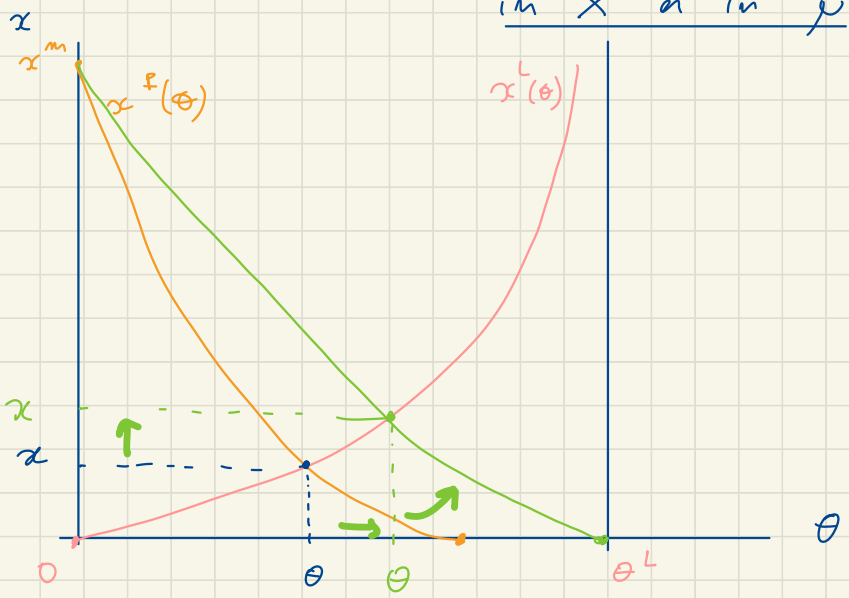
Aggregate demand shock: Positive shock: increase in X or in ν



$$x^f(\theta) = \tau^{-1}\left(\left[\frac{X^{\xi} \nu^{\alpha}}{w \cdot h} \cdot \frac{1}{f(\theta)} \right]^{\frac{1}{\xi - 1}} - 1 \right)$$

increasing

$$x^L(\theta) = f^{-1}\left(\frac{w/p}{a\,\alpha} \, h^{1-\alpha} f(\theta)^{1-\alpha} \left[1 + \tau(\theta) \right]^{\alpha} \right)$$

After an ↑ in AD (↑ in X or ↑ in ν).

- θ ↗ $\quad [\, f(\theta) \nearrow,\ q(\theta) \searrow,\ \tau(\theta) \nearrow \,]$
- x ↗ $\quad [\, f(x) \nearrow,\ q(x) \searrow,\ \tau(x) \nearrow \,]$
- $\ell = f(\theta) \cdot h$ so ℓ ↗
- what happens to y? unclear from AD curve → need a Σ approach ↗↗.

$$\left[\; y = \frac{\uparrow X^{\xi}}{[1+\tau(x)]^{\xi-1}} \quad \frac{\nu}{p}\uparrow \;\right]$$

$$\uparrow$$

$$(L) \quad f(x) = \frac{w/p}{a\,\alpha}\, h^{1-\alpha} \uparrow f(\theta)^{1-\alpha} [1+\tau(\theta)]^{\alpha}$$

$$\ell$$

$$\Rightarrow \alpha\, f(x) \cdot a \cdot \left[\frac{\uparrow f(\theta)\cdot h}{1+\tau(\theta)}\right]^{\alpha} = (w/p)\,\frac{\uparrow f(\theta)\cdot h}{\ell}$$

$$n$$

$$f(x)\; k = y$$

$$\Rightarrow \boxed{\alpha \cdot y = (w/p)\cdot \ell\uparrow}$$

labor share $= \alpha$

$$\downarrow$$

$$\frac{\text{labor income}}{\text{total income}}$$

From this we see: $y\uparrow$ $\quad = \dfrac{w\cdot \ell}{p\quad y}$

$= \alpha$

- unemployment rate $1 - f(\theta)$ $\downarrow$
- idleness rate $1 - f(x)$ $\downarrow$

$\Rightarrow$ less slack.