Computing Market Tightness from the AD and AS Curves

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Goal: determine tightness x -> from x we can infer all other variables in the model.

Household's spending/purchasing decision (by maximizing utility)

$$y = y^d(x, p^n(x))$$

Household's visit/shopping decision: (by matching process)

$$v = y / q(x)$$

$$y = v * q(x)$$

by definition: $x = v/k \Rightarrow v = x * k$

$$\Rightarrow y = x * q(x) * k$$

Link b/w trading proba: $f(x) = x * q(x)$

(by definition of probabilities (accounting); $f(x)$ offering; $q(x)$ buying)

$$\Rightarrow y = f(x) * k = y^s(x) = y$$

So in the model we always have:

$$y^d(x, p^n(x)) = y^s(x)$$

households choose consumption to max. utility

trades are governed by matching function & capacity supplied

Tightness α is computed by solving the $AD(\alpha) = AS(\alpha)$ equation

But need to specify a price norm $\rho^n(x)$ first → we obtain $\neq \alpha$, and $\neq$ properties, for different price norms.