Properties of the Matching Function

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m : matching function

$$M = m(S, B)$$

S: # sellers, B: # buyers

M: # of matches / trades in a given period

Example: labor market

- M = # of hires
- S = # unemployed workers
- B = # vacant jobs

Assumptions about m

- $\frac{\partial m}{\partial S} > 0$, $\frac{\partial m}{\partial B} > 0$
- $m(0, B) = m(S, 0) = 0$
- $\frac{\partial^2 m}{\partial S^2} < 0$, $\frac{\partial^2 m}{\partial B^2} < 0$
- m has constant returns to scale

$$m(\lambda S, \lambda B) = \lambda \cdot m(S, B)$$

- discrete time: M = # trade within time period

$$m(S, B) \leq \min(S, B)$$

- continuous time: M = flow of trades (no restrictions)