

# **Properties of the Matching Function**

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



$m$  : matching function  $\# \text{ sellers}$

$$M = m(S, B) \quad \# \text{ buyers}$$

$\#$  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)