

Firm's Production Function

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

Firms employ 2 types of workers:

- $l - m$ recruiters \rightarrow fill vacant jobs
 \uparrow
 $\frac{1}{c}(\theta) \times m \rightarrow$ do not participate in production
 \rightarrow HR department
- m producers \rightarrow participate in production

Production function:

$$k = a \times m^\alpha$$

- $a > 0$: technology of firm
- $\alpha \in (0, 1)$: diminishing marginal returns to labor
↳ required to obtain nondegenerate labor demand (Michaillat 2012)
- $m > 0$: # producers (not # employees)
- $k > 0$: firm's capacity \rightarrow # services that could be sold w/ enough customers
 \rightarrow in practice firms will sell less than capacity b/c of matching function
- what is sold is selling proba \rightarrow $f(\alpha) \cdot k \leq k$