

Firm's Production Function

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Firms employ 2 types of workers:

- $\ell - n$ recruiters \rightarrow fill vacant jobs
 \nearrow
 $\frac{\ell}{2}(\phi) \times n$
 - \rightarrow do not participate in production
 - \rightarrow HR department
- n producers \rightarrow participate in production

Production function:

$$k = a \times n^{\alpha}$$

- $a > 0$: technology of firm
- $\alpha \in (0, 1)$: diminishing marginal returns to labor
↳ required to obtain nondegenerate labor demand (Michaillat 2012)
- $n > 0$: # producers (not # employees)
- $k > 0$: firm's capacity \rightarrow # service 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 $y(x) \cdot k \leq k$
selling proba \nearrow