

LABOR DEMAND

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- ▶ **Source:** It's derived from peoples' desire to purchase the services offered by firms
- ▶ **Affected by:** peoples' preferences, income, available technologies, weather

THE PRODUCTION FUNCTION

A way of thinking about what firms do

$$q = f(E, K)$$

q = output

E = employment (by firm or establishment)

K = amount of capital available to work with at the firm or establishment

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- ▶ (Example)

PROFIT MAXIMIZATION

$$\text{profits} = pq - wE - rK$$

where:

p = price of output

w = wage rate

r = user cost of capital or interest rate

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- ▶ We assume the industry is *perfectly competitive* which means prices are taken as given (unchangeable) by individual firms
- ▶ Firms maximize profits, with prices fixed, they have to use E and K

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 - ▶ the value of the average product, $VAP_E = p \times AP_E$

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- ▶ If highest value of $VAP_E < w$, firms will hire no one.

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- ▶ Profit maximization implies $MC = p$ (This is the more usual equation used in micro)

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- ▶ (3) Improvements to technology have similar effect.

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- ▶ Further decreases to the wage continue to increase employment.

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 - ▶ As wage falls employment increases because MP_E in each firm is falling
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 - ▶ when wages for the industry move together, the firm's labor demand curve is steeper than the usual individual labor demand curve

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- ▶ Long-run demand curve is flatter than short-run demand curve

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- ▶ It is usually negative.
- ▶ A firm's long-run labor demand curve is more elastic than its short run demand curve (more negative)
- ▶ An industry-wide labor demand curve is less elastic than a single firm's labor demand curve