Why study labor demand and supply?

• Factor markets are important in themselves.
  – We are all interested in labor markets
  – We are particularly interested in one aspect, human capital

• The theory says important things about the markets for particular commodities.
  – We think of many commodities as factors of production.
  – An automobile is not a commodity per se, but a factor of production for transportation services.

• Firms worry a great deal about this topic.
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• Firms worry a great deal about this topic.
• Many important political topics turn on an understanding of factor markets.

The Basics of Factor Demand

Production isoquants describe the relation between inputs and outputs.

Two Key Propositions

• Labor has a positive marginal product.
• Labor has a diminishing marginal physical product.

MPP and VMP Curves

\[
VMP = MPP \times P
\]

The Short Run Demand For Labor

• The VMP curve is the short run labor demand curve.
The Short Run Demand For Labor

- The VMP curve is the short run labor demand curve.
- When the wage rate is \( w_o \), \( L_o \) workers are demanded.

\[ \begin{align*}
\text{Labor Demand} & \quad \text{\$} \\
L & \quad w_o \\
L_o & \quad L
\end{align*} \]

Change in Price

- In the price of the product increases, the VMP curve will shift up and the firm will hire more workers.

\[ \begin{align*}
\text{Labor Demand} & \quad \text{\$} \\
L & \quad w_o \\
L_0 & \quad L_1
\end{align*} \]

A fall in wages causes the firm to hire more workers; a rise in prices causes the firm to hire more workers.

Caution: this analysis holds \( K \) constant

End

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