

1. Labor demand overview
 - Employers: business firms, governments, households, other organizations
 - Our focus: demand by private, profit-maximizing employers (firms)
2. Marginal product theory of input demand: preliminaries
 - Assume firms choose inputs to maximize profit. Basic logic: add more of an input until the additional revenue generated by its product just equals its added cost
 - Marginal product defined: Increase in output for a small increase in one input, all other inputs fixed: $MP_L = \Delta Q / \Delta L$ holding other inputs fixed
 - *Diminishing marginal product*: Marginal product is decreasing as we add more of the input
 - Marginal revenue product: Change in revenue (\$) for a small increase in one input: $MRP_L = \Delta R / \Delta L = MP_L \cdot MR$
 - If the product market is competitive, then $MR = P$, so $MRP_L = MP_L \cdot MR = MP_L \cdot P$
 - Marginal expense of labor: Cost of one more unit of labor. In a competitive labor market, $ME_L = w$
3. Profit maximization
 - Choose L where the additional revenue generated by one more unit of labor just equals its added cost: $MRP_L = ME_L$
 - If both product and labor markets are competitive, this implies $MRP_L = MP_L \cdot P = ME_L = w$, or $MP_L = w/P$. That is, the marginal product = real wage
 - Numerical example (see attached)
4. The demand curve
 - Effect of varying the wage on a firm's quantity of labor demanded
 - Changes in capital or technology shift the demand curve
 - Market demand for labor
 - Estimates of labor demand elasticity
5. Ethical interpretations of the marginal productivity theory
 - John Bates Clark: MP measures contribution to production, so wage reflects that contribution too
 - Criticisms of Clark's view
6. Labor demand when other inputs can be adjusted (long run)
 - Scale and substitution effects
 - Complements and substitutes

Reading for next time: Card and Krueger, *Myth and Measurement*, chapter 2 (see web site)
Midterm exam next Thursday (10/25): To cover material through today's class. Readings:
Notes on Labor Economics, chapters 1-5; *Notes on Regression*, whole thing

Car dealership example

Revenue net of dealer cost of car = \$2,000 per car

Salesperson salary including benefits = \$6,000 per month = marginal expense of labor (ME_L)

Number of sales-persons	Cars sold per month	Marginal product of labor	Marginal revenue product of labor
0	0		
		10	\$20,000
1	10		
		11	\$22,000
2	21		
		5	\$10,000
3	26		
		3	\$6,000
4	29		
		1	\$2,000
5	30		
		0	\$0
6	30		

Profits are maximized where $MRP_L = ME_L$, which is between 3 and 4 salespersons:

Number of sales-persons	Monthly revenue from sales	Monthly labor cost	Revenue minus labor cost
0	\$0	\$0	\$0
1	\$20,000	\$6,000	\$14,000
2	\$42,000	\$12,000	\$30,000
3	\$52,000	\$18,000	\$34,000
4	\$58,000	\$24,000	\$34,000
5	\$60,000	\$30,000	\$30,000
6	\$60,000	\$36,000	\$24,000