

Microeconomics, Module 20: "Factors of Production"

Required reading:

(The attached PDF file has better formatting.)

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{The Landsburg textbook is excellent. We say to read certain sections and to skip others. This does not mean that certain sections are better; it means that the homework assignments and exam problems are based on the sections that you must read for this course. Some of the skipped sections are fascinating, but they are not tested.}

Read section 15.1, "The Firm's Demand for Factors of Production in the Short Run," on pages 499-504. Focus on the section "The Algebra of Profit Maximization" on the bottom half of page 501. These relations are not new, but they summarize the chapter. Know the definitions of *complements* and *substitutes in production* on the bottom left corner of page 502.

- Secretaries and voice mail are substitutes, since voice mail replaces the secretary.
- Actuaries and laptops are complements, since a laptop makes an actuary more productive and increases the demand for actuaries.

These relations are similar to substitutes and complements in consumption.

- Cameras and film are complements, since greater access to cameras makes consumers demand more film. A lower price for cameras increases the number of cameras bought and raises the demand for film.
- Wall phones and cellular phones are substitutes. A lower price for cellular phones increases the number of cellular phones bought and lowers the demand for wall phones.

Read section 15.2, "The Firm's Demand for Factors in the Long Run," on pages 505-511. Focus on substitution and scale effects on the bottom of page 507 and top of page 508, and know the three lines in light brown type (2 on page 508 and 1 on page 510). The effects of changes in the wage rate (and minimum wage laws) are on both the microeconomics and macroeconomics final exams. These conclusions are purely the economic effects; they do not relate to other social rationales for minimum wage laws.

Skip section 15.3, on pages 512-514 and skip section 15.4 on pages 514-519. Read the first half of the summary on page 519. To be sure you understand the mathematics of this chapter, look at numerical exercise N1 (a) and (b) on the top of page 521 and work through numerical exercise N2 (a, b, c, d, e) on the bottom of page 521 and top of page 522.