A low-angle, upward-looking photograph of several large, light-colored stone columns of a classical building. The columns are fluted and have ornate capitals. The sky is a clear, pale blue. The text is overlaid on the right side of the image.

TAXATION AND EFFICIENCY

Chapter 15

Presentation prepared by Seuren Williams to teach Economics
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Questions For Discussion (1 of 2)

Suppose that the demand for cigarettes in a hypothetical country is given by $Q_C^D = 2,000 - 200P_C$, where Q^P is the number of packs demanded and P_C is the price per pack. The supply of cigarettes is $Q_C^D = P_C \times 200$.

- a. Find the price and quantity of cigarettes, assuming the market is competitive.
- b. In an effort to reduce smoking, the government levies a tax of \$2 per pack. Compute the quantity of cigarettes after the tax, the price paid by consumers, and the price received by producers. How much revenue does the tax raise for the government? How much revenue comes from consumers, and how much from producers?


Key Points - Discussion Question 1

- a) Competitive market price: \$5, competitive market quantity: 1000
- b) Consumer price: \$6, producer price \$4, tax revenue: \$1,600, half of the revenue comes from consumers, and half from producers

Questions For Discussion (2 of 2)

Under the Canadian tax system, capital that is employed in the corporate sector is taxed at a higher rate than capital in the noncorporate sector. This problem will analyze the excess burden of the differential taxation of capital.

Assume that there are two sectors, corporate and noncorporate. The value of marginal product of capital in the corporate sector is given by $VMP_c = 100 - K_c$, where K_c is the amount of capital in the corporate sector; the value of marginal product of capital in the noncorporate sector is given by $VMP_n = 80 - 2K_n$, where K_n is the amount of capital in the noncorporate sector. In total, there are 50 units of capital in society.

- a. In the absence of any taxes, how much capital is used in each sector? (*Hint: Draw a diagram along the lines of  Figure 15.9 to organize your thoughts.*)
- b. Suppose that a unit tax of 6 is levied on capital employed in the corporate sector. After the tax, how much capital is employed in each sector? What is the excess burden of the tax?

Key Points: Discussion Question 2

- a) $VMP_c = VMP_n$, $K_c + K_n = 50$, $K_c = 40$, $K_n = 10$
- b) $VMP_c = 100 - K_c - 6$, $VMP_c = VMP_n$, $K_c + K_n = 50$, $K_c = 38$,
 $K_n = 12$, excess burden = \$6