1. You are an economic consultant to a city that just imposed a payroll tax of $1 per hour of work. This payroll tax is paid by workers through a payroll deduction: for each hour of work, the employer deducts $1 and sends the money to the city government. The initial wage is $10, and total employment is 20,000 hours per day. Use a graph to show the effect of the tax on the equilibrium wage and employment.

   The payroll tax shifts the supply curve to the left: at every price, a smaller quantity is supplied. The leftward shift of supply curve increase the equilibrium wage to a wage above $10.

6. Comment on the following: “There is no substitution for an airline pilot: someone has to fly the plane. Therefore, an increase in the wage of airline pilots will not change the number of pilots used by the airlines.”

   If indeed there is no substitute for a pilot, there is no input-substitution effect, but there is still an output effect. An increase in the pilot’s wage will increase the price of air travel, decreasing the quantity of air travel demanded and decreasing the number of pilots uses by the airlines.

8. Under some occupational licensing laws, licensed members of an occupation write licensing exams. An example is the bar exam for licensing lawyers. How might this practice limit entry into an occupation?

   The licensed members have an incentive to write exams that are overly difficult and to grade exams unfairly. Although almost everyone who takes the bar exam is a graduate of an accredited law school, the failure rate is about 30%.

9. One response to the gap in wages between men and women is a policy called comparable worth, under which the government specifies a minimum wage for some occupations, typically the occupations with a disproportionate number of women. Evaluate the merits of such a policy. What are the tradeoffs?

   The effect is similar to the minimum wage in general, and has the same problems. Employment is reduced; there is a loss of social welfare, and costs of products rise. However, it would benefit women and minorities who might gain from the program. A more direct way of dealing with the gender gap is to fight occupational discrimination by facilitating women entering male-dominated professions and by ensuring equal educational opportunities.