NYU STERN

The Global Economy
Professor David Backus

Practice Problems B: Labor Markets & Trade

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This will not be collected or graded, but it's a good way to make sure you're up to speed. We recommend you do it before the next class.

1. *Labor market analysis.* As the TF in a Global Economy section, you have been asked to work through an example to illustrate the impact of a minimum wage and payroll taxes on employment and unemployment. You start with these labor demand and supply functions:

$$\begin{aligned} \text{Demand:} \quad L^d(w) &= 1/(1.5w)^3 \\ \text{Supply:} \quad L^s(w) &= w^2. \end{aligned}$$

   (a) Describe first how a frictionless labor market might work. What wage rate clears the market (that is, equates supply and demand)? How much labor is employed? What is the unemployment rate? Sketch the result in a supply/demand diagram.

   (b) Now consider introducing a minimum wage. If the minimum wage is $w_m = 1$, how much labor is employed? How much is supplied? What is the unemployment rate? Show how this works in your diagram.

   (c) Suppose the minimum wage is $w_m = 1/2$. How much labor is employed? Supplied? What is the unemployment rate?

   (d) Suppose there is no minimum wage, but the government imposes 5% payroll tax: a tax on labor paid by the employer. That is: if w is the wage received by the employee, $1.05 \cdot w$ is what the employer pays. What is the equilibrium wage? Employment? How do they compare to the equilibrium without the tax?

   Comment. If you aren't comfortable with the mathematics here, you can answer the same questions qualitatively using a supply and demand diagram. You'll get the same insights.

2. *Protecting sugar.* The US has a long-running tradition of protecting sugar producers, going back to 1789 when Treasury Secretary Alexander Hamilton helped pass a tariff on sugar imports. (Tariffs at that time were the major source of federal government revenue and were needed to service the country's debt.) Currently the US restricts the quantity of sugar imports (quotas) and guarantees prices to US producers that are well above world prices. More information here and here.

(a) Who benefits from these policies?

(b) Who loses?

(c) Economists believe that the cost of sugar protection outweigh the benefits, yet these policies have been in place for 200 years. Why?

3. *Dumping coffee.* You are working for Illy USA, the American subsidiary of an Italian company that imports and sells coffee products in the US. You boss tells you that domestic coffee roasters have filed a dumping complaint against the company, but does not know what that means. He asks:

   (a) What must they show to sustain a judgement of dumping against Illy?

   (b) What damage could this do to Illy USA?

   (c) Why has dumping become more common in the recent past?