Licensing

1. Discuss the tradeoffs associated with imposing a licensing requirement on a profession. Under what conditions will licensing be most beneficial? Under what conditions will it do the most harm?

2. Consider a labor market for school administrators in State A, which currently has no licensing requirements and is in equilibrium. Illustrate graphically how a new policy that adds licensing requirements for school administrators – in the form of 2 years of additional college courses that must be taken and passed and are of no value outside of the labor market for educational administrators – will affect the labor market. Assume that the extra courses add no value in terms of screening better candidates or improving productivity. On your graph, document the pre- and post-licensing market wage, the effective take-home wage of licensed workers, and the dead weight loss associated with the licensing requirement.

Draw a second graph that considers the same policy, but instead of requiring 2 years of education specific coursework, the license requires candidates to obtain a Master’s in Business Administration (MBA) that has value in the labor market more broadly.

Why are the two graphs different?

Selection into Teaching

1. Consider the following basic earnings function for new entrants into the labor market with college degrees:

\[ Y = \beta_{0j} + \beta_{1j} \times S \]

In the equation, \( Y \) is earnings and \( S \) is a measure of skill. \( \beta_{0j} \) is an intercept that can vary by occupation, \( j \), and \( \beta_{1j} \) is a slope relating earnings to skill, which can also vary by occupation.

For simplicity, consider a two occupation world where individuals can either be teachers (T) or business professionals (P) and where \( \beta_{0T} = $100 \), \( \beta_{0P} = $60 \), \( \beta_{1T} = 0 \), and \( \beta_{1P} = $4 \). \( \beta_{1T} = 0 \) is enforced by the salary schedule that dictates teacher salaries and does not offer any returns to skill. The market for business professionals values units of skill at their value marginal product, which is constant at $4.
The distribution of skill in the population is such that worker 1 has 1 unit of skill, worker 2 has 2 units of skill, and so on. There are 100 workers in the economy.

a. What proportion of the population selects into teaching? What is the average number of skill units among teachers? Are teachers positively or negatively selected? Illustrate your answer with a graph.

b. Suppose that teaching is a more pleasant occupation than being a business professional and that the more pleasant working conditions are equivalent to giving teachers an additional $20 each. Now what proportion of the population selects into teaching? Does this change the direction of selection?

2. It is 1940 and women face significant discrimination in the private sector labor market. Here are earnings functions for men and women in the private sector as a function of “efficiency units” \( e \), which measure true worker productivity

\[
Y_M = 400 + 20e \\
Y_W = 300 + 10e
\]

Public schools offer a constant salary for all workers:

\[
Y_M = Y_W = 500
\]

Assume the labor market includes 100 men and 100 women and that the distribution of efficiency units is uniform and the same within genders: person 1 has one efficiency unit, person 2 has two efficiency units, person 3 has three efficiency units etc. What share of men and women would prefer jobs in public schools?

Assume everyone who would prefer a job in education applies and that the education sector will hire 10 workers from among the applicants. It can perfectly observe efficiency units. The education sector would like to hire the most productive workers it can find – what is the average number of efficiency units among the 10 workers hired?

Now fast forward to the year 2010. Discrimination in the private labor market against women has been greatly reduced and their new earnings function is:

\[
Y_W = 380 + 20e
\]

The earnings function for men and the constant salary in public education are unchanged. The education sector still wants to hire 10 workers. How does the average productivity of education-sector workers change between 1940 and 2010 as a result of improved outside labor market opportunities for women?