PA 5022 Labor Market Implications of Economic Policies

Due **October 11, 2021**

Fall 2021

**Homework 1: Incentives Compliance with government related business restrictions during a pandemic**

1. Calculate the incentive for firms *such as restaurants and health clubs* to violate the law by staying open during a pandemic if the firm has 20 potentially affected employees if (*U*0− *U*1) is increased revenue from workers from staying open are 0*.*12 and if it is 0*.*3. Assume present value estimates from staying open are (*πo*− *πc*) = $50*,*000, *F*=$6,000, and *p*=1, where o is open and c is closed.

2. Calculate the incentive for firms to violate the law if *F* = $3*,*000. Explain the role of fines on the likelihood of violations of these public policies within the quantitative approach and how would you use public policy to get firms comply using the approach noted in this problem? Hint: Net Expected Benefits from Illegal Activity is

(*U*0− *U*1)(*πo*− *πc*) − *pF*

Firm engages in illegal activity if net expected benefit is positive. See class notes. What are the implications for imposing fines on firms for staying open? What are the implications for employees if they are forced to close temporarily or permanently?

If there is no illegal activity then:

* E(π/Legal) = Uo πu + (1- U0) πn

If there is illegal activity then:

* E(π/illlegal) = U1 πu + (1- U1) π n– (p\*F)
* Net Expected Benefits from Illegal Activity is:
* E(π/illegal ) - E(π/legal ) = (U0 - U1)(πo – πc) – (p \*F)
* Firm engages in illegal activity if net expected benefit is positive:
* Given the conditions in the model, the firm’s compliance decision will be driven by:
* (πo – πc) = increase in firm profits,
* (U0 - U1) = increased revenue from workers from staying open
* *p \* F* = expected remedial payment arising from opening firm

***(U0 - U1)(πn - πu) – (p \* F) > 0***