Why do governments offer subsidies to attract business?

1. Common answer: jobs
   • economic case requires some clear thinking as we will see below

2. Tax base. Fiscal Externalities
   • new business may bring in more tax revenue than it costs, so a subsidy actually makes money
   • argument is common

3. Leviathan
   • government as whale, self-aggrandizing
   • kick backs to government workers...

Base Case with no Externalities

• Capital $K$ is mobile, has return $r_{US}$ determined at the national level.

• Labor $L^o$ is immobile so fixed.

• Production function $F(L, K)$, constant returns to scale. Assume $MP_L = F_L(L, K)$ increasing in $K$.

• $K^*$ No government intervention Value of the marginal product equals factor price. (See graph)

$$\frac{\partial F(L^o, K^*)}{\partial K} = r_{US}$$
• What is wage?

\( w^* = \frac{\partial F(L^0, K^*)}{\partial L} \)

• Wage bill equals:

\( w^*L^0 = F(L^0, K^*) - r_{US}K^* \)

• Suppose place subsidy \( s \) on capital in MSP so that \( r_{MSP} = r_{US} - s \).

  - What happens to capital? See graph see that demand for capital increase. \( K^{**} > K^* \)

  - What happens to wages? See graph so wages increase with the capital subsidy?

\[ w^{**} = \frac{\partial F(L^0, K^{**})}{\partial L} > \frac{\partial F(L^0, K^*)}{\partial L} = w^* \]

• To make the “jobs” argument, need to argue that there is some kind of externality or spillover.

  - This holds if \( wage > opportunity \ cost \)

    for marginal worker. So expanding quantity of labor raises local surplus. Holds if wages are not set competitively (e.g. through unions).

  - Maybe externality if through other intermediate inputs. If land an auto factory, might increase demand for other local products. If \( P > MC \), then local welfare increases

  - Point: to make economic case for a subsidy, have to get out of the competitive world where \( P = MC \)

• Example of getting out of the competitive world: Strategic Trade Policy

  - 2 oligopolisic firms, e.g. Boeing and Airbus, competing in a Cournot Duopoly

  - Plot reaction functions

  - A subsidy by U.S. to Boeing shifts out the Boeing reaction function. In equilibrium, Boeing grabs more share.

  - The subsidy has a cost of distorting Boeing behavior. But it has the strategic benefit (to the U.S.) of inducing Airbus to reduce output, leaving more rents for the U.S. firm.