

Notes on Reservation Wages

This is a point I made in class today.

Suppose an agent can work for a high-tech firm at wage w for effort with disutility equal to 15 thousand dollars, or take an alternative job that pays 80 thousand dollars per year with no effort cost. If the agent works for the high-tech firm, there is a probability of 0.1 that he will discover a device that will let him start his own firm and gain a benefit of 200 thousand dollars.

One way to set up this situation is to say that the worker's reservation utility is normalized to 0, so the high-tech firm must offer him a wage that satisfies the participation constraint

$$w + 0.1(200) - 15 \geq 80, \quad (1)$$

in which case $w^* = 75$.

Another way is to normalize the reservation utility to zero, so

$$w + 0.1(200) - 15 \geq 0, \quad (2)$$

in which case $w^* = -5$.

These are equivalent, since we can define the utility of a wage of 80 with effort of zero to equal any value we want— that is what “normalization” means.

What I warned you about was in how to interpret the second normalization. Its conclusion is that the firm should pay the worker a wage of -5, but that means \$5,000 below the wage the worker could get in alternative employment, not literally -\$5,000. Thus, it would be a mistake to then say that there could also be a bankruptcy constraint that the wage must be non-negative.