

Opportunity Cost of Inputs 3

Imagine a rural area with a current wage rate of \$20 per hour at which 1500 workers are employed and 500 are unemployed. A government project will hire 50 workers at the going wage rate. Assume reservation wages for those hired are more or less uniformly distributed between \$2 and \$20. The METB is 0.2. Estimate the expected opportunity cost of project labor.

ANSWER

Since unemployment is so high, the market wage is not the correct measure of the opportunity cost of labor. A reasonable approximation is to assume the opportunity cost of the additional workers are randomly drawn from a uniform distribution between \$2 and \$20. No one with an opportunity cost over \$20 will accept the job. (One could argue for using \$0 rather than \$2 as the lower bound.) The average opportunity cost is then \$11 per hour. With the METB, the cost is 0.2 times the public funds used to pay the wage, $0.2 \times 20 = 4$, plus the OC of the labor itself, or $\$11 + \$4 = \$15$ per hour per worker, or \$750 per project hour.