Economic Incentives for Job Safety

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In the 1970s, the Occupational Safety and Health Administration became the poster child for ineffective and intrusive regulation. OSHA was vilified for workplace standards that intruded on management decisions and often imposed seemingly nonsensical requirements. Early empirical studies of the impact of the agency on worker safety showed no demonstrable effects, so that there was no evident payoff from the imposition of regulatory costs.

Since this initial period of controversy, the nitpicking regulations were trimmed, and workplace safety has exhibited substantial improvement. Defenders of the agency point to the reduction in worker injuries as evidence of the efficacy of these command-and-control regulations. My own studies have found that OSHA has contributed to a significant decrease in worker injuries. But the preponderance of the decline in injuries over the past 80 years reflects continuation of the long-run improvements in safety. OSHA’s efforts have enhanced safety, but the agency could be even more effective.

The underlying economic determinants of safety hinge on how government policies influence the incentives for safety. Firms will make additional investments in safety to the extent that there is a financial incentive to do so. The principal market incentive is that workers require additional pay to work on dangerous jobs, and they currently receive pay at a rate that implies a value of statistical life on the order of $9 million. That works out to wage compensation at a rate of $900 for an annual fatality risk of 1 in 10,000. The total wage compensation for workplace fatalities and injuries is about $100 billion.

OSHA regulations contribute to this type of market operation through policies that inform workers of the hazards they face. One such regulatory effort that alerts workers to workplace risks and contributes to the functioning of markets is the OSHA hazard communication regulation. After OMB rejected the regulatory proposal, OSHA appealed the decision to then Vice President George H. W. Bush. OSHA’s benefit assessments were too low, since they valued worker lives based on their lost earnings, or what they termed the “cost of death.” My analysis that introduced the value of statistical life into OSHA’s analysis led to benefits exceeding costs and the issuance of the regulation. OSHA has a continuing vital role to play in alerting workers to hazards that they might not otherwise understand.

In addition to payment of higher wages to workers to incur job risks, there is also compensation of workers after job injuries through the state workers’ compensation programs. In 2013, the net workers’ compensation premiums written through commercial lines was $41 billion. This insurance program in turn establishes powerful incentives for safety through experience rating of firms. Larger firms especially are incentivized through this process. My empirical estimates found that in the absence of workers’ compensation, workplace fatality rates would be 30 percent greater.

How do the financial incentives for safety created by OSHA compare with those generated through wage compensation and workers’ compensation? The regulatory approach involves the use of inspections to identify standards violations, which can lead to financial penalties. In my research on EPA inspections of water pollution from pulp and paper mills, I found that this regulatory strategy can be extremely effective. In the case of water pollution, EPA receives regular discharge monitoring reports and undertakes frequent on-site inspections. In contrast, seeing an OSHA inspector remains a rare event, with an annual probability of about 1 in 100 at any given worksite. The associated penalties levied in this enforcement process are still low, with total initial proposed OSHA penalties of under $150 million in 2010. The financial incentives for safety created by OSHA are dwarfed by the other forces at work.

Bolstering OSHA’s impact requires that the agency generate greater financial incentives for safety. A more vigorous enforcement effort and much more substantial penalty levels would be essential components of such an initiative. But there should also be a recognition of the underlying economic forces at work. OSHA should target its efforts at risks for which the market does not function effectively, such as dimly understood health hazards. More visible acute risks pose fewer challenges for the operation of market forces and workers’ compensation incentives.

Identification of areas where market forces clearly fail can assist in the effective targeting of OSHA efforts. Mexican immigrant workers incur about 40 percent greater fatality risks than do native U.S. workers, but they receive less hazard pay for these risks. For Mexican immigrants who are not fluent in English, there is no evident wage compensation for the substantial fatality risks that they face. OSHA can potentially play a constructive role by creating powerful financial incentives for safety to address these and other market failures.

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