OSHA's Role in Promoting Occupational Safety and Health

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OSHA's Role in Promoting Occupational Safety and Health*

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Abstract

When OSHA was established, proponents believed it would dramatically improve the safety and health of American workers. During the forty years of its existence, workplace fatalities and nonfatal injuries and illnesses have fallen but OSHA is not the major cause of this decline. Changes in the industrial mix of workers and improvements in safety technology have combined with expanded employer incentives unrelated to OSHA to decrease worker injuries and illnesses. The financial incentives for employers to expand expenditures on worker safety and health created by the labor market, states' workers' compensation insurance programs, and the legal system swamp the meager incentives created by OSHA.

This survey examines OSHA in light of the other forces affecting workplace safety in the United States to generate a set of policy recommendations for how it can best use its limited resources to improve

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worker safety and health. No evidence exists that expanding the total number of inspections or the average amount of fines for noncompliance would improve its effectiveness significantly. OSHA can best complement the other pillars of the US safety policy system by providing information to workers about possible hazards, particularly health-related hazards, and by gearing inspections toward worksites where dangers are hard to monitor and firms employing less mobile and less knowledgeable workers. It should continue to offer consultation services to small- and medium-sized firms and encourage firms to establish management systems addressing worker safety and health issues.

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1

Introduction

At the end of the 1960s, 3 percent of American workers each year were injured seriously enough on the job to require at least one day away from work to recover, resulting in the loss of over 100,000 man-years of production. Although manufacturing injury rates were fairly steady in the early 1960s, the lost-time injury rate increased from about 12 injuries per million man-hours in 1963 to 15.2 per million man-hours in 1970, a compound growth rate well exceeding 3 percent per year. Another 390,000 workers were diagnosed with industrial diseases each year, and estimates held that only 25 percent of American workers exposed to health hazards were adequately protected (Smith, 1976).

The seemingly dire and deteriorating situation facing American workers led Congress to pass the Occupational Safety and Health Act of 1970 (OSH Act). The Act created two federal agencies: the Occupational Safety and Health Administration (OSHA), which establishes and enforces workplace safety and health standards, and the National Institute for Occupational Safety and Health (NIOSH), which conducts research into the causes and possible remedies of occupational injuries and illnesses.

OSHA is not the first government effort in the United States to promote occupational safety and health. Before passage of any formal program addressing workplace safety, the legal system created incentives for employers to be concerned with the safety and health of their workers. Under common law, workers injured on the job could recover damages if they could prove that their employer was negligent. The possibility of legal liability for damages raises the expected cost of workplace hazards to firms, thereby encouraging them to expand safety efforts. The safety incentives of the tort liability system were widely viewed to be inadequate because employers could avoid legal liability using three common law defenses: the worker's injury was caused by another worker (the fellow-servant doctrine), resulted from a normal hazard of the job (assumption of risk), or stemmed at least partially from the worker's own actions (contributory negligence). Additionally many felt that courts' ex post negligence determination left too many workers uncompensated for injury and created too much uncertainty regarding payment of damages (Darling-Hammond and Kniesner, 1980; Fishback, 1987; Fishback and Kantor, 1998).

More active government involvement in the area of workplace safety began in the United States in 1877 when Massachusetts passed legislation requiring the guarding of belts, shafts, and gears; protection on elevators; and adequate fire exits in factories. Other states followed suit over the next few years, passing their own laws protecting workers against harms including, in some states, factory inspections to ensure compliance (US Department of Labor, OSHA, 2009a).

States reinforced these limited safety and health regulations with workers' compensation legislation beginning in the 1910s. Workers' compensation made firms strictly liable for industrial injuries. Regardless of fault, employers must pay all of injured workers' medical bills and a portion of lost income. In return for no-fault insurance coverage, workers cannot sue employers for damages due to work-related injuries. By 1920 most states had passed workers' compensation laws and by 1948, with passage in Mississippi, all states had enacted legislation. Workers' compensation insurance should encourage employers to improve workplace safety if the price of insurance declines as the dollar value of claims for health and income replacement benefits falls. In the other direction, higher benefits reduce the economic loss from injury and may cause workers to be less concerned with safety, particularly with respect to less serious injuries.

In the 1960s, the purchasing power of workers' compensation insurance benefits fell as inflation outpaced the increase in legislated benefits. The rise in workplace accidents and the drop in real benefits led many to believe that the workers' compensation insurance system was largely failing in its twin goals of encouraging workplace safety and compensating workers adequately for their losses. The OSH Act created not only OSHA and NIOSH, but also the National Commission on State Workmen's Compensation Laws, which evaluated the adequacy, equity, and timeliness of the state workers' compensation laws then in effect. The Commission encouraged states to modify their workers' compensation programs and raise their income replacement rates. The higher benefits raised the cost of purchasing workers' compensation insurance and may have resulted in increased filing of fraudulent claims for benefits. Cost pressures and concerns with worker safety in the 1980s and 1990s led many states to modify their programs once again.

Government safety policy has evolved over time in response to perceived deficiencies in previous efforts. Even in the absence of any legal liability for damages or formal government programs to promote occupational safety and health, employers still have incentives to be concerned with the welfare of their workers. Morally, no one wants to be responsible for the death or ill health of another. Financially, employers realize that workers will not accept employment in worksites they know are hazardous unless they are compensated for doing so. The positive relationship between wages and risk means that the market rewards employers with improving safety records with lower labor costs and punishes employers with deteriorating safety records with higher labor costs. Workplace injuries can also lower worker productivity by disrupting production and pulling people away from the workforce temporarily. Eliminating hazards may be expensive, but the drop in wages and the rise in output may more than pay for the costs of additional safety efforts.

One may think of the US safety policy system as consisting of four pillars: the legal system, workers' compensation insurance, OSHA, and the labor market. The legal system establishes financial liability for workplace injuries and illnesses. Changes in liability standards alter worker and firm incentives regarding the appropriate level of care and the resulting overall level of safety. Workers' compensation insurance pays for the health care and a portion of lost income of workers injured on the job. A more generous workers' compensation insurance system raises the cost of injuries to firms and may encourage them to expand their safety efforts so as to lower their costs of purchasing insurance coverage. OSHA establishes safety and health standards and inspects firms for noncompliance. Depending on the level of fines and the frequency of inspections, firms will initiate new safety programs in line with OSHA requirements. Finally, all of the first three pillars alter the financial incentives facing workers and firms, and through their interplay in the labor market determine the aggregate level of safety. Even in the absence of the other three pillars, the labor market on its own creates incentives for firms to be concerned with worker safety. Workers must be compensated for doing something they dislike, such as accepting greater workplace risk, by something they like, such as more income. The positive relationship between wages and risk means firms with better safety records are rewarded in the market by being able to pay less to attract equally qualified workers than firms with worse safety records.

This survey examines the four pillars of the US safety policy system with a focus on the most recent effort, OSHA. The goal is to determine how OSHA could best use its limited resources to improve worker safety and health in light of incentives already created through the labor market, state workers' compensation insurance programs, and the legal system. The survey is organized as follows. The next section develops the general economic model of production and the workplace when there are inevitable risks to safety and health. The third and fourth sections present the institutional details of OSHA and the nature of workplace fatalities and nonfatal injuries in the United States. The survey then moves on to examine the evolving enforcement of OSHA regulations over the forty years of its existence and the corresponding empirical estimates of its effectiveness in improving worker safety and health. The next three sections discuss the other three pillars of the US safety policy system, detailing their strengths and weaknesses in generating appropriate safety incentives. The following sections evaluate the likely impact on worker safety of expanding OSHA enforcement power and assess the cost-effectiveness of OSHA in its entirety and some of its regulations individually. The survey concludes with recommendations on how best to improve OSHA's effectiveness in promoting worker safety and health.

This survey concludes that no evidence exists that by magnifying OSHA's enforcement powers, either by increasing the frequency of inspections or by raising the level of fines for noncompliance, worker safety and health would improve dramatically. As currently designed, the compliance and enforcement costs of OSHA appear to exceed the benefits of the relatively small improvements in safety, meaning the program is not cost effective. Given our absence of knowledge of OSHA's impacts in many important areas, such as the effectiveness of its voluntary programs or its capacity to prevent work-related illnesses, eliminating or seriously reducing the scope of OSHA would also be unwise. It further finds that with its current budget, OSHA can best help workers by focusing its efforts in areas not well served by the other three pillars of the US safety policy system. But even in these areas, OSHA need not always take a regulatory approach to improving worker safety. Firms, workers, insurance companies, and equipment manufacturers react to new information on workplace hazards, minimizing, in some cases, the need for a more heavy-handed approach.

OSHA can best complement the other pillars of the US safety policy system by providing information to workers about possible hazards, particularly health-related hazards, and by gearing inspections toward worksites with hard-to-monitor dangers and firms employing less mobile and less knowledgeable workers. Although not universal, the preponderance of the empirical evidence finds accidents within establishments inspected by OSHA falling for two to five years after the inspection. The safety impact is largest for inspections discovering violations of safety standards and for establishments inspected by OSHA for the first time. The results suggest that OSHA should target its inspection efforts broadly over many firms and not narrowly, inspecting a few firms repeatedly. Small firms face lower financial incentives to improve worker safety than large firms and generally lack the staff with the knowledge on how best to achieve a safe and healthy workplace. OSHA should continue to offer consultation services to small- and medium-sized firms and encourage (but not require) all firms to establish management systems addressing worker safety and health issues.

Compensating wage differentials for workplace risk provide firms with a financial incentive to improve worker safety and health. Compensating wage differentials will not develop if workers do not know of the risks they face and, equally important, workers cannot protect themselves against harms of which they are unaware. By conducting research into the causes and the possible remedies of workplace accidents and diseases, NIOSH generates the information necessary for workers to understand the dangers they face. The Obama administration has recommended cutting NIOSH's budget. NIOSH's budget should not be reduced and the results of its research should be widely disseminated to workers by OSHA through expanded education and outreach programs.

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