

COSTS OF ACCIDENTS AND INJURIES TO THE CONSTRUCTION INDUSTRY^a

Discussion by Greg Howell,³ Member, ASCE

The authors have done a great service by bringing some consistency of method to the problem of understanding the costs of accidents. Their discussion of the indirect costs is a valuable addition, but some confusion remains. They define direct costs "as those actual contractor cash flows that can be directly attributable to injuries and fatalities," but only include insurance costs in this category. They define "indirect costs" as those which are less tangible. This list includes costs which can be measured, such as the cost of administration, replacement training, repair and cleanup, etc. It would be clearer to simply use "insured" and "uninsured" as accepted by the American Safety Council in 1959 (*Accident Facts* 1982).

As valuable as the paper is, in the conclusion, the authors overstep their own data and, with no support, disparage the motivations of contractors. Of course, the human and financial costs of accidents are appalling. There are far too many accidents, and the cost of treatment is rapidly increasing. But the author's conclusion that "many contractors appear to be immune to the moral, ethical, and social consequences of occupational injuries and fatalities" is not supported by the evidence in the article. Instead, this statement appears to be contradicted by their earlier observation that "injury and fatality rates have declined in the past few years," and by their call for joint action on the problem.

Just as it was a mistake to blame productivity problems on worker motivation, it is both too simple and a mistake to blame contractor motivation for the industry's inability to solve a complex problem. Placing blame reduces both the pressure to probe for deeper knowledge, and the acceptance of our own responsibilities.

APPENDIX. REFERENCE

Accident Facts. (1982). National Safety Council, Chicago, Ill.

Closure by John G. Everett,⁴ Member, ASCE

The writers wish to thank the discussor for his interest and comments regarding the paper. The paper separates the costs of accidents and injuries into two categories: direct and indirect costs. The writers have taken a slightly different approach than the "insured" versus "uninsured" costs that have been used in other studies and which were suggested by the discussor. There may be some confusion, because "insured" costs are often equated to the cost of insurance.

For workers' compensation insurance, there is a big difference between the cost of insurance (the amount the contractor pays to the insurance carrier) and the cost of injuries (the amount the insurance carrier pays to or on behalf of injured employees for medical bills, rehabilitation, lost wages, etc.). The difference is the insurance carrier's overhead and profit. This "insurance split" was assumed in both the original Busi-

ness Roundtable study and the paper to be 65% for claims benefits and 35% for the insurance carrier's overhead and profit. The Business Roundtable study ("Improving" 1982) includes the overhead and profit in the indirect cost multiplier. The paper explicitly counts the overhead and profit as an indirect cost. A self-insured contractor would only pay the claims benefits, and there would be no insurance carrier's overhead and profit. This is recognized in both the Business Roundtable study and the paper, and therefore, only the claims benefits are counted as direct costs.

The other type of insurance included in both the Business Roundtable study and the paper is public or third-party liability insurance that applies to injuries to anyone other than the contractor's employees. The Business Roundtable study included the full amount of liability insurance in direct costs. The paper separates third-party claims into an insured component and an uninsured component, but both are counted as indirect costs.

The reason for counting all of the third-party claims as indirect costs is that the amount of benefits paid for medical bills, rehabilitation, and lost wages is often only a small fraction of the total amount of the claim. Third-party claims can include payments for pain and suffering, negligence, punitive damages, and other issues that go well beyond the medical bills, rehabilitation, and lost wages covered by workers' compensation insurance. In construction, the injured third-party is likely to be an employee of a different contractor or subcontractor working on the same project; therefore the medical bills, rehabilitation, and lost wages will be covered by the injured third-party's own workers' compensation insurance, and have thus already been counted as a direct cost.

The paper counts only medical bills, rehabilitation, and lost wages as direct costs, and counts everything else as indirect costs. In any case, the differences between the Business Roundtable study, the paper, and the suggested "insured" versus "uninsured" breakdown are only accounting differences, and the total costs remain the same.

The writers stand by their statement that "many contractors appear to be immune to the moral, ethical, and social consequences of occupational injuries and fatalities." The discussor correctly notes that this statement is not supported by evidence in the article, but it is well supported by even the most cursory review of injury and fatality statistics. Every week, it seems, trade publications carry news about unnecessary injuries and fatalities and contractors who have been cited by OSHA for willful and repeated violations.

Occupational health and safety is indeed a complex problem in construction, but numerous studies have shown that contractors who take safety seriously can dramatically reduce injury and fatality incidence rates. Yet the bloodbath continues, because there are other contractors who do not take safety seriously. The writers do not wish to assign blame or question the motivations of contractors, but, as the last sentence of the paper suggests, do hope to provide some economic incentive to improve safety in cases where moral, ethical, and social considerations by themselves are not working.

APPENDIX. REFERENCE

"Improving Construction Safety Performance." (1982). *Constr. Ind. Cost Effectiveness (CICE) Project, Rep. A-3*, Business Roundtable, New York, N.Y.

^aJune 1996, Vol. 122, No. 2, by John G. Everett and Peter B. Frank Jr. (Paper 10616).

³Assoc. Prof., Dept. of Civ. Engrg., Univ. of New Mexico, Albuquerque, NM 87131-1351.

⁴Asst. Prof., Dept. of Civ. and Envir. Engrg., Univ. of Michigan, 2352 G. G. Brown Lab., Ann Arbor, MI 48109-2125.