# Economic Feasibility of Occupational Safety and Health Standards Under OSHA

*The Occupational Safety and Health Act mandates that American workers' safety and health be fully protected. Since full compliance with OSHA would be economically burdensome to many employers, courts have interpreted OSHA's statutory language and legislative history to require that the Department of Labor promulgate economically feasible standards. This comment discusses the two competing methods for determining economic feasibility, the cost-benefit analysis and the pure cost analysis. This comment argues for the rejection of the cost-benefit analysis and a rehabilitation of the pure cost analysis in order to better balance health and economic considerations.*

## I. INTRODUCTION

Congress enacted the Occupational Safety and Health Act[1] (OSHA) in response to the high annual rate of work-related deaths and disabling injuries occurring in the United States.[2] OSHA mandates that American workers' safety and health be fully protected.[3] To implement this mandate, the Department of Labor[4] (the Department) promulgates health and safety standards[5] which apply to all businesses.

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[1] 29 U.S.C. § 651 (1976).

[2] S. REP. No. 1282, 91st Cong., 2d Sess. 2 (1970).

[3] 29 U.S.C. § 651 (b) (1976). For a limitation on this protection, see text accompanying note 14 *infra*.

[4] The Department of Labor is responsible for full enforcement of OSHA. 29 U.S.C. § 651(b)(3) (1976).

[5] OSHA has two main provisions for the promulgation of permanent occupational safety and health standards. Under the first, OSHA authorizes the Department to promulgate national consensus standards as OSHA standards. 29 U.S.C. § 655(a) (1976). National consensus standards are defined as

> any occupational safety and health standard or modification thereof which (1) has been adopted and promulgated by a nationally recognized standards-producing organization under procedures

OSHA compliance is economically burdensome to most businesses.[6] To alleviate this burden, courts have interpreted OSHA's statutory language and legislative history to require the Department to promulgate economically feasible standards.[7] Confusion exists, however, over how to assess economic feasibility.

Two competing methods have been developed to assess the economic feasibility of OSHA standards. The first, the cost-benefit

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whereby it can be determined by the Secretary that persons interested and affected by the scope or provisions of the standard have reached substantial agreement on its adoption, (2) was formulated in a manner which afforded an opportunity for diverse views to be considered and (3) has been designated as such a standard by the Secretary, after consultation with other appropriate agencies.

29 U.S.C. § 652(9) (1976).

Examples of national standard-setting organizations are the American Society for Testing and Materials (ATSM) and the American National Standards Institute (ANSI). For a full discussion of the various organizations, see Hamilton, *The Role of Non-Governmental Standards in the Development of Mandatory Federal Standards Affecting Safety or Health*, 56 TEX. L. REV. 1329, 1338-45 (1978). Five months after OSHA went into effect, the Department converted 250 pages of national consensus standards into OSHA standards. *Id.* at 1389.

Under the second main provision, OSHA authorizes the Department to promulgate new standards on its own initiative. 29 U.S.C. § 655(b) (1976). The procedures for promulgation of new standards include committee discussion and public participation in the form of written comments and oral testimony. *Id.* § 655(b).

[6] OSHA often requires businesses to expend money to alleviate health or safety risks. When compliance costs are high, OSHA standards can be economically burdensome. *See, e.g.*, American Iron & Steel Inst. v. OSHA, 577 F.2d 825, 836 (3d Cir. 1978), where compliance with a coke oven emission standard cost $240,000,000 to $1,280,000,000, and Secretary of Labor v. Castle & Cooke Foods, 5 OSHC 1435, 1437 (O.S.H.R.C. 1977), where compliance with a noise standard cost $697,000. The extent of the financial burden imposed on business depends upon the liquidity of the firms' resources and the amount of the required expenditure. Small business is one group particularly burdened by OSHA compliance because its resources are not liquid. *See Problems Confronting Small Business: Hearings Before the Senate Select Comm. on Small Business*, 94th Cong., 1st Sess., 429-31 (1975).

[7] *See, e.g.*, RMI Co. v. Secretary of Labor, 594 F.2d 566 (6th Cir. 1979); American Petroleum Inst. v. OSHA, 581 F.2d 493 (5th Cir. 1978), *aff'd. sub nom.* Industrial Union Dep't, AFL-CIO v. American Petroleum Inst., 100 S. Ct. 2844 (1980); American Iron & Steel Inst. v. OSHA, 577 F.2d 825 (3d Cir. 1978); U.P.S. of Ohio, Inc., v. OSHRC, 570 F.2d 806 (8th Cir. 1978); AFL-CIO v. Brennan, 530 F.2d 109 (3d Cir. 1975); Industrial Union Dep't., AFL-CIO v. Hodgson, 499 F.2d 467 (D.C. Cir. 1974).

analysis,[8] weighs the benefits to workers against the costs of compliance.[9] If benefits outweigh costs, then the health and safety standard is economically feasible.[10] The second, the pure cost analysis,[11] focuses on whether or not the standard is generally affordable to affected firms.[12] If general affordability is found, then the standard is economically feasible.[13]

Initially, this comment examines OSHA's vague statutory language and legislative history which have spawned the debate over which analysis is proper. The comment then discusses the problems of benefit and cost assessment under both a cost-benefit and pure cost analysis. The comment finally suggests a way to better accommodate health and economic considerations by rehabilitating the pure cost analysis.

## II. OSHA's Statutory Language and Legislative History

In the text of OSHA, Congress declares that its purpose and policy is "to assure *so far as possible* every working man and woman in the nation safe and healthful working conditions and to preserve our human resources."[14] The words "so far as possible" express congressional realization that health and safety cannot be fostered at all times.[15] Similarly, in another section of the

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[8] *See, e.g.*, American Petroleum Inst. v. OSHA, 581 F.2d 493 (5th Cir. 1978), *aff'd sub nom.* Industrial Union Dep't, AFL-CIO v. American Petroleum Inst., 100 S. Ct. 2844 (1980).

[9] Essentially, the cost-benefit analysis requires the employer to absorb the costs of employee health as a cost of production. *See* Section III (A) *"Cost-Benefit Analysis" infra.*

[10] The goal of a cost-benefit analysis is to determine whether or not a particular course of action or policy justifies the cost. *See* Prest & Turney, *Cost-Benefit Analysis: A Survey*, in 3 A Survey of Economic Theory 155 (1966). In the context of OSHA compliance, the goal is to promulgate health standards, the costs of which are justified. "Economically feasible standards" is the shorthand phrase for justified costs.

[11] *See, e.g.*, American Iron & Steel Inst. v. OSHA, 577 F.2d 825 (3d Cir. 1978); Industrial Union Dep't, AFL-CIO v. Hodgson, 499 F.2d 467 (D.C. Cir. 1974).

[12] Industrial Union Dep't, AFL-CIO v. Hodgson, 499 F.2d 467, 477 (D.C. Cir. 1974).

[13] General affordability is to be distinguished from the conclusion that the standard is economically feasible for *all* businesses. The Department's determination of economic feasibility does not necessarily mean that all firms can comply. *Id.*

[14] 29 U.S.C. § 651(b) (1976) (emphasis added).

[15] The point that "practical considerations can temper protective require-

Act dealing with toxic substances, Congress declares that the Department "shall set the standard which most adequately assures, *to the extent feasible,* on the basis of best available evidence, that no employee will suffer material impairment of health or functional capacity. . . ."[16] The phrase "to the extent feasible" expresses Congress' view that worker protection cannot occur at all times. Congress, however, did not discuss how or under what circumstances the feasibility qualification should be implemented, and the legislative history does not clarify this statutory language.[17] Despite this lack of guidance, courts interpret the statutory language and legislative history to require that the Department promulgate economically feasible standards.[18]

Both the cost-benefit analysis and the pure cost analysis ascertain whether or not OSHA standards are economically feasible. Both are therefore permissible under OSHA's broad mandate to promulgate economically feasible standards, since neither the statutory language nor the legislative history suggests any specific method.[19] The broader question, however, is which is the more desirable tool to assess economic feasibility.[20]

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ments" is recognized in Industrial Union Dep't, AFL-CIO v. Hodgson, 499 F.2d 467, 477 (D.C. Cir. 1974).

[16] 29 U.S.C. § 655(b)(5) (1976) (emphasis added).

[17] *See* S. REP. No. 1282, 91st Cong., 2d Sess. 2 (1970). The feasibility requirement was added by amendment. *Id.* It states that the Secretary is expressly required to consider economic feasibility.

[18] RMI Co. v. Secretary of Labor, 594 F.2d 566, 571 (6th Cir. 1979); American Petroleum Inst. v. OSHA, 581 F.2d 493, 496 (5th Cir. 1978), *aff'd sub nom.* Industrial Union Dep't, AFL-CIO v. American Petroleum Inst., 100 S. Ct. 2844 (1980); American Iron & Steel Inst. v. OSHA, 577 F.2d 825, 835 (3d Cir. 1978); U.P.S. of Ohio, Inc. v. OSHRC, 570 F.2d 806, 812 (8th Cir. 1978); AFL-CIO v. Brennan, 530 F.2d 109, 122-23 (3d Cir. 1975); Industrial Union Dep't, AFL-CIO v. Hodgson, 499 F.2d 467, 477 (D.C. Cir. 1974).

The statutory language and legislative history have also been held to encompass technological feasibility. Marshall v. West Point Pepperell, Inc., 588 F.2d 979, 981 (5th Cir. 1979); Turner Co. v. Secretary of Labor, 561 F.2d 82, 85 (7th Cir. 1977); AFL-CIO v. Brennan, 530 F.2d 109, 122 (3d Cir. 1975). Although technological feasibility is related to economic feasibility in that a control which is not easily adapted to existing technology may necessitate the development of alternative technologies at a high cost, this comment discusses only economic feasibility.

[19] Given the vague legislative history and statutory language, perhaps *any* method of ascertaining economic feasibility would be permissible under OSHA.

[20] The United States Supreme Court recently declined to decide whether or

## III. Benefit Assessment

### A. Cost-Benefit Analysis

The cost-benefit analysis, because it involves a comparison of dollar amounts, requires the quantification of health benefits.[21] This quantification occurs by examining neutral scientific data, interpreting and characterizing such data and then placing a monetary value on the benefit as characterized.[22] It is necessary to arrive at a monetary value in order to compare costs and benefits.[23] For example, data might demonstrate that a 75% hearing loss occurs because of an over-exposure to noise in a canning plant. A court would interpret this data as demonstrating a severe health risk. The monetary value assigned to the risk would be high in order to account for its severity. Then the health benefit as quantified would be compared with the cost of compliance.

The central flaw in this analysis is that the monetary value assigned to the health benefit cannot accurately or meaningfully reflect the value of the benefit.[24] It is merely an arbitrary figure

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not the Department must weigh the costs and benefits of the proposed standard. American Petroleum Inst. v. OSHA, 581 F.2d 493 (5th Cir. 1978), *aff'd sub nom.* Industrial Union Dep't, AFL-CIO v. American Petroleum Inst., 100 S. Ct. 2844 (1980).

[21] H. Peskin & E. Seskin, Cost-Benefit Analysis and Water Pollution Policy 6 (1975).

[22] "A crucial prerequisite to any cost-benefit analysis is the availability of *relevant data*." *Id.* at 7 (emphasis added). "Given the importance of unmeasured benefits [unquantifiable benefits] it is essential that they be handled appropriately in the cost-benefit analysis. One reasonable way of dealing with these effects is to *describe their nature* in as explicit terms as possible, and where feasible, describe them in non-monetary though quantitative units." *Id.* at 57 (emphasis added). Under a cost-benefit analysis, after the data is described in the most explicit terms possible, monetary value is assigned. *See* text accompanying note 23 *infra*.

[23] If no monetary value is assigned, there can be no determination that costs outweigh benefits, or vice versa. *See* text accompanying note 26 *infra*.

[24] Some health benefits can be quantified. Hospital costs, diminished productivity and worker's compensation premiums, for example, can be described in dollars-and-cents terms. But most costs, especially those costs personal to the worker, cannot be. For a discussion of health as an intangible factor, see H. Peskin & E. Seskin, *supra* note 21, at 120-22.

Economist Henry Peskin argues that the possibility of arriving at some monetary figure begs a central question, that is, whether or not a policymaker should attempt to quantify intangibles in the first place. He further argues that arriving at a monetary figure functions as a disservice to the policymaker

which reflects the characterization of the benefit. Yet the cost-benefit analysis is premised upon the notion that quantification of health is not only possible, but accurate.[25] This assumption renders the cost-benefit analysis inappropriate in the area of health benefit assessment. It also tends to make the characterization of the health risk determinative, since the characterization dictates what monetary value will be assigned to the benefit. Consequently, the result under a cost-benefit analysis is prefabricated.

For example, when there is no concrete scientific data demonstrating a health risk, the characterization of the risk is "unknown." Since no monetary value can be assigned to the risk, there can be no comparison of cost and benefit. The Department thus cannot promulgate a standard regarding that health risk.[26] In *American Petroleum Institute v. OSHA*,[27] for example, the Fifth Circuit rejected the Department's benzene standard because there was no data available on health benefit.[28] The court recognized that, although benzene is a known carcinogen,[29] no data exists as to what constitutes a safe level of exposure.[30] Consequently, the court was unable to conclude that the benefit out-

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in that it falsely gives him a "number to hang his hat on when in fact there is no justification for the number." *Id.* at 126.

In personal injury cases, it is also necessary to quantify health, but quantification of health in the tort context differs from quantification under OSHA. The attempt to compensate a personal injury plaintiff by transforming plaintiff's injury into monetary terms does not have to be, nor does it pretend to be, a true reflection of plaintiff's loss. Under OSHA, however, the quantification of health must be assumed to be precise, since the promulgation of the standard depends upon such an assumption (*see* note 22 *supra*). Moreover, in tort law there is no alternative to compensatory damages; one is forced to tolerate an imprecise system. Under OSHA, on the other hand, the pure cost analysis is an alternative to the cost-benefit analysis, so that one is not forced to pretend that imprecision is in fact precise.

[25] *See* H. PESKIN & E. SESKIN, *supra* note 21, at 6.

[26] In American Petroleum Inst. v. OSHA, 581 F.2d 493 (5th Cir. 1978), *aff'd sub nom.* Industrial Union Dep't, AFL-CIO v. American Petroleum Inst., 100 S. Ct. 2844 (1980) the Court stated, "[C]ongress provided that OSHA regulate on the basis of knowledge rather than the unknown." *Id.* at 504.

[27] *Id.*

[28] *Id.* at 504. The American Petroleum Institute had challenged an OSHA standard reducing the benzene exposure limit from 10 parts per million (ppm) to 1 ppm.

[29] *Id.* at 498.

[30] *Id.* at 504.

weighed the cost. The court stressed that the Department must have substantial evidence of health benefit before it can promulgate a standard.[31]

On appeal, the United States Supreme Court affirmed the Fifth Circuit's holding.[32] The Supreme Court held that the Department, as a threshold matter, must find that the "toxic substance in question poses a significant health risk in the workplace, and that a new, lower standard is therefore reasonably necessary or appropriate."[33]

The impact of this opinion on the promulgation of health and safety standards regulating exposure to carcinogens is unclear. While the Court requires the Department's assumptions in regard to risk to be supported by a "reputable body of scientific thought,"[34] "anything approaching scientific certainty" is not required.[35] But this "reputable body of scientific thought" requirement will require additional litigation for further definition. At present, it is clear only that while some facts are required, scientific certainty is not.[36]

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[31] The Court said, "[U]ntil OSHA can provide substantial evidence that the benefits to be achieved by reducing the permissible exposure limit from 10 ppm to 1 ppm bear a reasonable relationship to the costs imposed by the reduction, it cannot show that the standard is reasonably necessary. . . ." *Id.* at 504.

The substantial evidence test is the standard of review mandated by OSHA. 29 U.S.C. § 655(f) (1976). Cases challenging the promulgation of a standard before its enactment are accorded direct review in the United States Court of Appeals for the circuit in which the party resides or has its principal place of business. *Id.* § 655(f). If a party is aggrieved by a final order of the Review Commission, post enforcement provisions for judicial review are also provided for in the Act. *Id.* § 660.

[32] Industrial Union Dep't, AFL-CIO v. American Petroleum Inst., 100 S. Ct. 2844, 2850 (1980).

[33] *Id.* at 2850.

[34] *Id.* at 2871.

[35] *Id.* The Court said that it did not want to create a "mathematical straightjacket" that would preclude promulgation in areas which lie on the frontiers of scientific knowledge. *Id.*

[36] This implies a level of certainty less than that required under a cost-benefit analysis. *See* notes 21-23 and accompanying text *supra*. A "reputable body of scientific thought" would seem to include opinion and conjecture, with which the cost-benefit analysis cannot deal effectively. It is arguable, then, that if the Court holds in a future case that a cost-benefit analysis is required, it will have to modify its present view on the level of evidence sufficient to uphold an OSHA regulation. Such a holding, however, would restrict the Department's ability to protect the American worker. One can conceive of situations

When data indicates that a "severe" health hazard exists, the Department will assign a high monetary value to the health benefit.[37] Given OSHA's mandate to protect worker health,[38] characterization of the risk as "severe" causes the benefit of the regulation to weigh more heavily in the analysis than the cost of compliance.[39] Consequently, the benefit will outweigh the cost of compliance, and the Department will promulgate the standard.[40]

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in which the Department could promulgate a standard on the basis of reputable scientific thought which lacked the certainty required under the cost-benefit analysis. For example, the scientific community might agree that any exposure to a certain substance is probably unsafe because of its toxic properties. But if the harmful effects of exposure have a slow gestation period, there will be little data which concretely supports the scientists' conclusions. Requiring a cost-benefit analysis as support for an OSHA standard would cause this potential danger to go unregulated.

The Court's present view goes far enough in assuring that the Department promulgates OSHA standards from a position of knowledge. This view is consistent with the position taken by several lower federal courts which have circumvented the cost-benefit analysis. *See, e.g.*, Industrial Union Dep't, AFL-CIO v. Hodgson, 499 F.2d 467 (D.C. Cir. 1974):

> What we are entitled to at all events is a careful identification by the Secretary, when his proposed standards are challenged, of the reasons why he chooses to follow one course rather than another. Where that choice purports to be based on the existence of certain determinable facts, the Secretary must, in form as well as in substance, find those facts from the evidence in the record. By the same token, when the Secretary is obliged to make policy judgments where no factual certainties exist, or where facts alone do not provide the answer, he should so state and go on to identify the considerations he found persuasive.

*Id.* at 475-76. *See also* American Iron & Steel Inst. v. OSHA, 577 F.2d 825, 830-31 (3d Cir. 1978); Synthetic Organic Chem. Mfrs. Ass'n v. Brennan, 503 F.2d 1155, 1160 (3d Cir. 1974), *cert. denied*, 420 U.S. 973 (1975).

[37] *See* text accompanying notes 22-23 *supra*.

[38] 29 U.S.C. § 651(b) (1976). *See* notes 1-3 and accompanying text *supra*.

[39] In RMI Co. v. Secretary of Labor, 594 F.2d 566 (6th Cir. 1979), the court stated:

> [I]t must be emphasized that the primary purpose of the statute is 'to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources.' [citation omitted]. Thus benefits to employees should weigh heavier on the scale than the costs to employers.

*Id.* at 572.

[40] In Industrial Union Dep't., AFL-CIO v. American Petroleum Inst., 100 S. Ct. 2844 (1980), the Court said that once the Department met the substantial evidence requirement by basing its assumptions on a "body of reputable scientific thought," the Department was free to define "significant" risk. *Id.* at 2871.

When data suggests a "negligible" health risk, and cost is not extremely low, then the cost will invariably outweigh the benefit.[41] In *Castle & Cooke Foods v. OSHA*,[42] for example, the Occupational Safety and Health Review Commission[43] held that compliance with a noise standard was not economically feasible because the minimal hearing loss did not justify compliance costs of $697,000.[44] The Commission did not assign a specific monetary value to the health risk. Instead, it merely concluded that the value was less than $697,000[45] by labelling the hearing loss as unserious.[46] Once the Commission characterized the hearing loss factor as negligible, it was predictable that the benefits

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In this regard, the Court suggested that the Department may be conservative in defining "significant," erring on the side of overprotection rather than under-protection. *Id.* Therefore, once the data demonstrates severe risk, the Department will follow the Supreme Court's suggestion to err on the side of overprotection.

Despite OSHA's mandate to protect worker health, one court has stated that OSHA does not envision putting employees out of work in order to protect them: "Congress does not appear to have intended to protect employees by putting their employers out of business—either by requiring protective devices unavailable under existing technology or by making financial viability generally impossible." Industrial Union Dep't, AFL-CIO v. Hodgson, 499 F.2d 467, 478 (D.C. Cir. 1974). Consequently, it is unclear that a decision favoring promulgation would occur, even in the face of a severe health risk, if widespread unemployment would result.

[41] In Industrial Union Dep't, AFL-CIO v. American Petroleum Inst., 100 S. Ct. 2844 (1980), the Court said that "some risks are plainly acceptable and others are plainly unacceptable. If, for example, the odds are one in a billion that a person will die of cancer by taking a drink of chlorinated water, the risk clearly could not be considered significant." *Id.* at 2871. Thus, under a cost-benefit analysis, a low monetary value would be assigned, and cost would outweigh benefit.

[42] 5 O.S.H.C. 1435 (O.S.H.R.C. 1977).

[43] The Review Commission's role is to carry out adjudicatory functions under the Act. 29 U.S.C. § 651(b)(3) (1976). Businesses challenging the enforcement of a OSHA provision contest the citation before the Commission. 29 U.S.C. § 661 (1976).

[44] Secretary of Labor v. Castle & Cooke Foods, 5 O.S.H.C. 1435, 1440 (O.S.H.R.C. 1977).

[45] *Id.*

[46] *Id.* at 1439. "Moreover, excessive noise is not life threatening nor is it considered to be a serious health hazard within the meaning of the Act whereas other types of health hazards which may require significant expenditures of funds to abate are serious or life threatening, *e.g.*, those involving carcinogenic air contaminants." *Id.*

would not outweigh the cost of compliance.[47]

The cost-benefit analysis thus inadequately deals with the problem of health benefit assessment. It requires quantification of physical conditions that cannot be meaningfully quantified. In the process, the characterization of the health risk assumes a determinative role in the analysis. "Unknown" risks go unregulated, while the alleviation of "severe" risks can be easily justified. The cost of alleviating "negligible" risks will be justified only when compliance cost is low. In sum, the cost-benefit analysis produces predetermined results based on the faulty premise that health can be accurately quantified. Since the pure cost analysis does not rely on this premise, it is preferable in this respect.

### *B. Pure Cost Analysis*

The pure cost analysis avoids quantifying health by focusing on whether or not the health risk is an appropriate subject for regulation. For one court, the issue was whether the Department tried to meet a "perceived health need."[48] In some cases, it is easy to perceive a health need and to respond specifically to it. For example, it is easy to grasp the need for a hand guard on a "beam-dinker" which drives a hand-held die down into a piece of leather positioned on a block;[49] the beam could crush a finger if one were trapped on top of or under the die as the dinker came down.

In other situations, the health risk is less precisely defined,

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[47] The Commission appears to view health hazards as falling into either the life threatening or the unserious mold. This type of sweeping categorization does not adequately deal with the problem of evaluating the value of health to individual workers. In this case, calling hearing loss unserious because a worker may not die from it appears cavalier and insensitive. Yet perhaps this type of sweeping, simplified categorization is necessary to perform a cost-benefit analysis. It is far easier to quantify an unserious or a life threatening health risk than it is to quantify a health risk falling between these two extremes. Consequently, the tension under a cost-benefit analysis is to force the health risk into a characterization that by its very nature determines the result. Anything short of an extreme categorization poses too difficult a problem in regard to the necessary quantification.

[48] American Iron & Steel Inst. v. OSHA, 577 F.2d 825, 832 (3d Cir. 1978).

[49] A.E. Burgess Leather Co. v. OSHRC, 576 F.2d 948, 949 (1st Cir. 1978). The Department enacted a specific regulation to alleviate this risk. 29 C.F.R. § 1910.212(a)(3) (1979).

and the method of responding effectively to it is less certain. For example, the carcinogenic effect of coke-oven emissions is known,[50] but the level of safe exposure is not.[51] Under a pure cost analysis, the fact that coke-oven exposure is carcinogenic is a perceived health need which warrants regulation.[52] The Department need not justify the level it sets in terms of specific health benefits.[53] Instead, the analysis turns on whether or not the business can afford to comply with the level set.[54]

The pure cost analysis of perceived need differs substantially from benefit assessment under a cost-benefit analysis. No effort is made to quantify the health benefit in monetary terms, nor is it necessary to justify promulgation on the basis of health benefits outweighing costs. Instead, a much more flexible inquiry is made into whether or not some health risk exists. Once this is established, the process of assessing benefits ends.[55]

The propriety of an OSHA regulation under the pure cost analysis depends upon whether the employer can afford the controls.[56] Consequently, the protection of health does not ultimately turn upon the *need* to protect health, but rather on the employers' *ability* to protect health. In this sense, the value of fostering health is undermined. A severe health hazard may go unregulated because the standard is not affordable. The Occupational Safety and Health Review Commission rejects the concept of affordability for this reason.[57]

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[50] American Iron & Steel Inst. v. OSHA, 577 F.2d 825, 831 (3d Cir. 1978).

[51] *Id.* at 831-32.

[52] *Id.* at 832.

[53] *Id.* After the court concluded that the Department was meeting a perceived health need, the court ended its discussion of health benefits. Under a cost-benefit analysis, the data would have to be characterized and have a monetary value assigned to it. *See* note 22 and accompanying text *supra*.

[54] American Iron & Steel Inst. v. OSHA, 577 F.2d 825, 835-36 (3d Cir. 1978).

[55] It is arguable that this is the thrust behind the recent Supreme Court decision in Industrial Union Dep't, AFL-CIO v. American Petroleum Inst., 100 S. Ct. 2844 (1980). The Supreme Court's "significant risk" and the Third Circuit's "perceived health need" are analogous in that neither requires scientific certainty. However, the current standard of "significant risk" may be slightly more rigorous given the Court's language regarding factual data. *See* text accompanying note 33 *supra*.

[56] *See, e.g.*, American Iron & Steel Inst. v. OSHA, 577 F.2d 825 (3d Cir. 1978), where the court stated: "[C]ompliance with the standard (even if the higher cost estimate were used) is well within the financial capability of the coking industry." *Id.* at 836.

[57] Secretary of Labor v. Castle & Cooke Foods, 5 O.S.H.C. 1435, 1438

Thus, the pure cost test is valuable because it dispenses with the cost-benefit analysis' requirement of health quantification. Yet, in curing this flaw, it sometimes makes worker health and safety dependent upon the financial solvency of the employer. Given OSHA's mandate to protect worker health,[58] this approach does not achieve the Act's objectives when compliance is not affordable.[59]

## IV. Cost Assessment

### *A. Cost-Benefit Analysis*

By design, the cost-benefit analysis used in OSHA cases does not consider whether the standard is affordable to business. Instead, the Department of Labor would determine compliance costs generally, without regard for the financial viability of individual businesses.[60] This neglect of affordability poses two problems. First, it hurts businesses which find it financially difficult to alleviate even minor health risks. Second, it hurts workers when health risks are significant but not sufficient to outweigh the cost of compliance.

*Castle & Cooke Foods v. OSHA*[61] and *American Petroleum Institute v. Secretary of Labor*[62] exemplify this latter problem. Both courts held that the standards promulgated were infeasible, despite the fact that the affected businesses could afford to comply with the standards.[63] Consequently, in both cases, em-

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(O.S.H.R.C. 1977). Instead of focusing on affordability, the Review Commission performs a cost-benefit analysis. The problem of health being dependent on the financial condition of the employer, however, becomes an issue only when the employer cannot afford to comply with OSHA. If compliance is affordable, the health hazard will be alleviated.

[58] 29 U.S.C. § 651(b) (1976). *See* notes 1-3 and accompanying text *supra*.

[59] For further discussion on cost assessment under the pure cost analysis, see Section IV (B), *"Pure Cost Analysis," infra*.

[60] *See* Secretary of Labor v. Castle & Cooke Foods, 5 O.S.H.C. 1435 (O.S.H.R.C. 1977). The Commission said, "[W]e do not think that a specific employer's economic situation is particularly relevant in determining the feasibility of noise controls." *Id.* at 1438.

[61] Secretary of Labor v. Castle & Cooke Foods, 5 O.S.H.C. 1435, 1438 (O.S.H.R.C. 1977).

[62] 581 F.2d 493 (5th Cir. 1978), *aff'd sub nom.* Industrial Union Dep't, AFL-CIO v. American Petroleum Inst., 100 S. Ct. 2844 (1980).

[63] *Id.* at 503; Secretary of Labor v. Castle & Cooke Foods, 5 O.S.H.C. 1435-38 (O.S.H.R.C. 1977). The affordability of the noise control standard was par-

ployees were not protected from a recognized health hazard.[64] If these courts had focused on affordability, they would have held the standard feasible, and employees would have been protected.

The failure to consider affordability also hurts those businesses that find it difficult to comply with OSHA. A small business with limited resources may be forced to comply regardless of affordability considerations because the health benefits outweigh the average costs.[65] Strict OSHA compliance can thus force small businesses out of the marketplace.[66]

The rationale for neglecting affordability is that it is undesirable to have worker health depend upon the financial viability of the employer. This is laudable in that, if it errs, it errs on the side of worker protection when compliance is not affordable. But this expression of concern for health backfires when an employer who can afford to comply does not have to.[67] Likewise, it functions unfairly by affecting most those small businesses that find it hardest to comply. Moreover, the problem of worker health's

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ticularly clear in *Castle & Cooke Foods*. Castle and Cooke is a subsidiary of a large food corporation. It argued that its status as a subsidiary should be ignored in the analysis of economic feasibility. The Commission accepted this argument since it did not focus on affordability; the Commission refused to consider the Department's evidence that the enterprise could afford the controls.

[64] In Secretary of Labor v. Castle & Cooke Foods, 5 O.S.H.C. 1435, 1439 (O.S.H.R.C. 1977), the Commission recognized that hearing loss would occur. In American Petroleum Inst. v. OSHA, 581 F.2d 493, 497-98 (5th Cir. 1978), *aff'd sub nom.* Industrial Union Dep't, AFL-CIO v. American Petroleum Inst., 100 S. Ct. 2844 (1980), the court recognized that benzene is a known carcinogen, though safe levels of exposure were not known. *See* notes 28-30 and accompanying text *supra.*

[65] *See generally Impact of OSHA on Small Business: Hearings Before the Subcomm. on Energy, Safety and Research of the House Comm. on Small Business,* 95th Cong., 1st Sess. (1977); *Small Business and the Occupational Safety and Health Act of 1970: Hearings Before the Subcomm. on Environmental Problems Affecting Small Business of the House Select Comm. on Small Business,* 92d Cong., 2d Sess. (1972).

[66] For a further discussion of the economic burdens which OSHA sometimes creates for small businesses, see note 6 *supra. See generally* hearings cited in note 65 *supra.*

[67] *See, e.g.,* Secretary of Labor v. Castle & Cooke Foods, 5 O.S.H.C. 1435 (O.S.H.R.C. 1977); American Petroleum Inst. v. OSHA, 581 F.2d 493 (5th Cir. 1978), *aff'd sub nom.* Industrial Union Dep't, AFL-CIO v. American Petroleum Inst., 100 S. Ct. 2844 (1980). *See also* notes 56-57 and accompanying text *supra.*

depending upon financial solvency can be solved.[67a]

### *B. Pure Cost Analysis*

In *Industrial Union Dep't., AFL-CIO v. Hodgson,*[68] the court grappled with the problem of economic feasibility as a general attack on an OSHA standard. In reviewing a standard for asbestos, the court developed a pure cost approach to the statutorily mandated requirement of economic feasibility.[69] The *Hodgson* test, albeit dicta, inquires into both the ability of the employer to comply and, if the employer cannot afford to comply, the reasons for such inability.[70] *Hodgson* has proven to be a major force in the discussion of economic feasibility and many other courts have cited it as precedent.[71]

There are, unfortunately, several problems with the mechanics of implementing *Hodgson.*[72] Initially, it is unclear to whom the

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[67a] *See* Section V, "RESOLUTION," *infra.*

[68] 499 F.2d 467 (D.C. Cir. 1974).

[69] *Id.* at 477. *See* note 15 *supra.*

[70] The *Hodgson* court reconciled any economic hardship caused the employers with the objectives of the Act:

> It would appear to be consistent with the purposes of the Act to envisage the economic demise of an employer who has lagged behind the rest of industry in protecting the health and safety of employees and is consequently financially unable to comply with the new standards as quickly as other employers.

Industrial Union Dep't, AFL-CIO v. Hodgson, 499 F.2d 467, 478 (D.C. Cir. 1974).

[71] *E.g.,* Southern Colorado Prestress Co. v. OSHRC, 586 F.2d 1342, 1351 (10th Cir. 1978); American Iron & Steel Inst. v. OSHA, 577 F.2d 825, 835 (3d Cir. 1978); A.E. Burgess Leather Co. v. OSHRC, 576 F.2d 948, 951 n.2 (1st Cir. 1978); AFL-CIO v. Brennan, 530 F.2d 109, 122 (3d Cir. 1975).

[72] One problem is that the court does not define what it means by "prohibitive expense." Prohibitive expense is the court's shorthand phrase for an economically infeasible standard. Industrial Union Dep't, AFL-CIO v. Hodgson, 499 F.2d 467, 477 (D.C. Cir. 1974). The court suggests that an OSHA standard which drives employers out of business is prohibitively expensive, but standards which are financially burdensome are permissible. *Id.* at 477-78.

If the court is suggesting that only financial impossibility will render a standard infeasible, this may be too strict a test, since functional equivalents of financial impossibility exist. For instance, compliance may be economically possible but may create a psychological disincentive to continue in business. To include a notion of psychological disincentive within the notion of financial impossibility would not violate the thrust of OSHA. In fact, it appears the court recognizes this because it states that OSHA is not designed to eliminate employers from the marketplace. *Id.* at 478. *See* note 40 *supra.* If this is the

Department must address the question of economic feasibility. The court used the terms individual firm and industry interchangeably.[73] Consequently, does the court direct the Department to examine all industries covered by the standard, to examine individual businesses within an industry, or both? The amount of detailed analysis required by *Hodgson* is an issue as yet unresolved.

The Department, however, uses this ambiguity to its own advantage by avoiding detailed analyses as much as possible.[74] To the extent that *Hodgson* does permit an aggregate industry-by-industry analysis, the Department uses *Hodgson* to justify its conclusions about economic feasibility. For example, the Department used *Hodgson*[75] to justify a selected industry-by-industry analysis in the formulation of the benzene standard.[76] The Department did not inquire into the composition of the industry affected by the standard.[77]

The central flaw in this assessment of cost is that certain groups may be left out of the analysis. Small business, for example, is usually a component of a particular industry. Moreover,

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focus of OSHA's considerations of economic feasibility, then it is arguable that factors which function in the same way as financial impossibility should also be included in the notion of prohibitive expense.

[73] 499 F.2d 467, 478 (D.C. Cir. 1974). *See, e.g.*, the following language in the opinion: "This qualification is not intended to provide a route by which recalcitrant *employers* or *industries* . . ." (*id.*); "Nor does the concept of economic feasibility necessarily guarantee the continued existence of *individual employers*" (*id.*); "If the standard requires changes that only a *few leading firms* could quickly achieve . . ." (*id.*); "If the competitive structure or posture of the *industry* would be otherwise adversely affected . . ." (*id.*) (emphasis added).

[74] The Assistant Secretary of Labor has stated that to promulgate a separate set of standards for each industry would overly tax the Department's resources. Rather than follow this approach, the Assistant Secretary has stated that "we have set our policy from the beginning toward the development of general standards which are applicable equally to all establishments in all industries." *Small Business and the Occupational Safety and Health Act of 1970: Hearings Before the Subcomm. on Environmental Problems Affecting Small Business of the House Select Comm. on Small Business*, 92d Cong., 2d Sess. 301 (1972) (statement of George Guenther). The Department, then, views its role as promulgating generally affordable standards (*see* note 13 *supra*). The tension is that the *Hodgson* court may be suggesting that ascertaining general affordability is inadequate.

[75] 43 Fed. Reg. 5,793, 5,934 (1978).

[76] *Id.* at 5,936-40.

[77] *Id.*

small business usually finds OSHA compliance difficult.[78] When the Department performs an aggregate industry-by-industry analysis, problems peculiar to small business may be ignored. Yet small business must still comply with the standard.[79]

Another problem with *Hodgson* revolves around the inquiry into why businesses cannot afford to comply with OSHA. The court stated that if a business cannot comply because of a poor health and safety record, then the standard will be held feasible.[80] The court classified businesses as either "concerned" or "unconcerned" and created an exception for the latter. However, it is unclear how the Department is to distinguish the concerned from the unconcerned in its promulgation process. One way to distinguish the two would be to examine the health and safety record of the industry. But, given the Department's limited resources,[81] it is unlikely that such an examination could occur.

In *AFL-CIO v. Brennan*,[82] the Third Circuit attempted to give some substance to this exception. The court suggested that low productivity was the hallmark of an unconcerned firm or industry.[83] The court did not articulate the relationship between an inability to comply, low productivity and a disregard for employee health or safety. Presumably, the court equated unhealthy workers with low productivity and low profit. Low profit would thus mean less money available for compliance purposes. Low productivity is not a helpful guide, however, since it could result from a variety of factors other than poor employee health. Inexperience could cause an inefficient allocation of resources which might lead to low productivity. Likewise, changes in personnel or in modes of production could cause a firm or industry to be less productive for a time.

Thus, the *Hodgson* court's view of economic feasibility is important primarily because the court introduces the concept of

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[78] For a discussion of the economic burdens which OSHA sometimes creates for small business, see note 6 *supra*.

[79] OSHA standards are mandatory and apply to all businesses. 29 U.S.C. § 651(b)(3) (1976). *See* note 5 *supra*.

[80] "This qualification [that standards be economically feasible] is not intended to provide a route by which recalcitrant employers or industries may avoid the reforms contemplated by the Act." Industrial Union Dep't, AFL-CIO v. Hodgson, 499 F.2d 467, 478 (D.C. Cir. 1974).

[81] *See* note 74 *supra*.

[82] 530 F.2d 109 (3d Cir. 1975).

[83] *Id.* at 123.

affordability into the analysis. But since the court does not identify the subject of the Department's analysis, some groups are left out. Moreover, the court vaguely describes an exception to the feasibility requirement for unconcerned firms and industries. It is unclear how the Department is to incorporate this exception into its promulgation process. These problems, in combination with the notion that health depends upon an employer's financial solvency,[84] render the current pure cost test an inadequate structure for the statutorily mandated determination of economic feasibility. However, unlike the problems under the cost-benefit analysis, these problems can be solved.

## V. Resolution

A major problem in OSHA regulation is how to incorporate the statutory requirement of economic feasibility into the promulgation process. The cost-benefit analysis and the pure cost analysis are the two currently competing methods for determining economic feasibility.[85]

The cost-benefit analysis should be rejected because it rests on the faulty premise that health benefits to workers can be meaningfully and accurately quantified.[86] Moreover, this faulty premise renders the characterization of the health risk determinative, making the result under a cost-benefit analysis prefabricated.[87]

The pure cost analysis' focus on perceived health need[88] is preferable to the cost-benefit analysis' focus on quantified benefits. The perceived health need standard is far more flexible; it can include those health risks which are generally known but are incapable of specific scientific substantiation.[89] In addition, it provides an outer limit beyond which promulgation would be unnecessary.[90] Therefore, if the standard promulgated to meet

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[84] *See* notes 56-57 and accompanying text *supra*.

[85] *See* notes 8-9 and accompanying text *supra*.

[86] *See* notes 24-25 and accompanying text *supra*.

[87] *See* notes 26-47 and accompanying text *supra*.

[88] *See* note 48 and accompanying text *supra*.

[89] Unsafe exposure levels of benzene and coke oven emissions, for example, are incapable of scientific substantiation. *See* notes 27-31 and 50-52 and accompanying text *supra*.

[90] To this extent, the pure cost analysis incorporates the cost-benefit analysis' concern that regulation is necessary. It differs, however, because the means of determining need are more flexible and more sensitive to actual heath

this perceived health need is affordable to those affected by it, there is no justifiable reason not to promulgate, given OSHA's mandate to protect worker health.[91] Moreover, promulgating affordable standards comports with the statutory requirement of economic feasibility.[92]

The flaw in the pure cost analysis, however, is that the employees' health depends upon the financial solvency of the employer.[93] When the standard is affordable, this flaw is merely theoretical, since the standard will ordinarily be promulgated. When the standard is not affordable, however, this flaw becomes a practical reality. The *Hodgson* court addressed this problem to some extent by requiring the Department to inquire into why the standard is not affordable and by requiring compliance when it is not affordable because of a disregard for employee health.[94] Assuming that it would be statutorily permissible to require compliance with a standard which is infeasible in the event of such a disregard for health,[95] the Department possesses inadequate resources to perform the kind of examination necessary to discover this disregard.[96]

One solution to this problem would be to shift the burden of proof on the issue of the disregard of employee health to the affected business.[97] Under this scheme, the Department would

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problems. *See* notes 50-55 and accompanying text *supra*.

[91] One qualification to this statement is that it is unclear how close a fit is required under OSHA between the standard and the alleviation of the health risk. Presumably, if a standard promulgated to arrest a health risk is ineffective, then the Department's promulgation of it would be open to challenge.

[92] *See* notes 14-19 and accompanying text *supra*.

[93] *See* notes 56-58 and accompanying text *supra*.

[94] *See* note 80 and accompanying text *supra*.

[95] OSHA does require standards to be economically feasible. *See* notes 14-19 and accompanying text *supra*. It is an open question whether or not an employer's disregard for health enables a court to apply a standard in the face of admitted infeasibility. One way to do this, perhaps, would be to label the standard functionally feasible, since but for the employer's neglect of health the standard would be feasible.

[96] *See* note 74 *supra*.

[97] It is the Department's duty under OSHA to promulgate economically feasible standards (*see* notes 14-19 and accompanying text *supra*). The issue of why an employer cannot comply is part of the decision to promulgate. Therefore, the responsibility for ascertaining whether or not an employer disregards employee health lies with the Department. In Barker v. Lull Eng'r. Co., 20 Cal. 3d 413, 573 P.2d 443, 143 Cal. Rptr. 225 (1978), the California Supreme Court utilized a burden shift to relieve a plaintiff in a products liability action of

still have the initial burden of determining general, industry-wide affordability. If, however, an individual business or industry claimed that the standard was too onerous, that business or industry would bear the burden of proof that the inability to comply was not a result of past disregard for employee health. In accordance with the standard of review mandated by OSHA,[98] industry or an individual business should be required to show by substantial evidence that it has not disregarded employee health.[99] If the Department determined that the industry or business had not made the required showing, and the Department promulgated the standard, this determination would be subject to review in the courts.[100]

This rehabilitaton of the pure cost analysis would fulfill OSHA's requirement that workers stay healthy and would also take into account the relevant economic considerations. To a certain extent, a tension between worker health and financial constraints will always exist under OSHA. The goal, however, is to attain a more rational balance than now exists under either the current cost-benefit analysis or the pure cost analysis.

*Ginna Ingram*

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onerous evidentiary burdens. One of the reasons the court shifted the burden was that most of the evidence on the issue was within the defendant's exclusive knowledge. *Id.* at 431, 573 P.2d 455, 143 Cal. Rptr. 237. Moreover, the court stated that the burden shift furthered a fundamental policy, in that a manufacturer who seeks to escape liability should bear the burden of convincing the trier of fact that its product is not defective. *Id.* Similarly, in regard to the health and safety record of a particular firm or industry, most of the evidence is within the knowledge of the firm or industry. In light of OSHA's mandate to protect worker health, the fundamental policy behind OSHA would be furthered by requiring a firm or industry affected by the standard to show that it has not disregarded employee health.

[98] 29 U.S.C. § 655(f) (1976).

[99] OSHA requires the employer to keep extensive health and safety records. Therefore, requiring industry to come forward with substantial evidence demonstrating that it has not disregarded employee health would not create a new or particularly onerous burden. *Id.* § 657(c).

[100] *Id.* § 655(f).

## Professor Brigitte Bodenheimer

September 27, 1912—January 7, 1981

The UC Davis Law Review dedicates this issue to the memory of Professor Brigitte Bodenheimer. A renowned family law scholar, Professor Bodenheimer played an important role in advising the Review and in developing King Hall's family law curriculum. As reporter for the Uniform Child Custody Jurisdiction Act, she led the way in local, national and international efforts to combat child snatching. Her contributions to the law—in the fields of retirement plans, juvenile and conciliation courts, adoption, marital property and custody law—richly reflect the force of her ideas and her human qualities. Those who knew Professor Bodenheimer as a teacher or colleague will treasure their memories of her gentle humor, her warmth and her dignity. King Hall and the world are poorer without her. She will be sorely missed.

*The Editors*