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Small Business Performance in the Regulated Economy

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SMALL BUSINESS PERFORMANCE IN
THE REGULATED ECONOMY

By

Kenneth W. Chilton and Murray L. Weidenbaum

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By Kenneth W. Chilton and Murray L. Weidenbaum

SUMMARY

In spite of the widespread concern about the various burdens imposed by government regulation in America today, there seems to be a naive belief on the part of some government policymakers and much of the public that the regulatory system is neutral with respect to the size of the business firm. In reality, a great deal of government regulation has disproportionately adverse effects on smaller businesses.

One of the most serious threats to the continued existence of the small firm is the requirement for major capital expenditures to meet environmental or workplace safety standards. Less frequent, but no less serious, are regulations that reduce the market for a firm's product, such as a ban on a product, or a performance standard that precludes the use of the product for its normal market application.

Typically, the small firm must rely on relatively short-term debt in order to finance its operations, and this reliance tends to make the firm a poor candidate for increased debt to meet regulatory requirements. For instance, if a large company has access to bond markets and borrows one million dollars to meet regulatory capital expenditures at a 10 percent rate, the annual amortization of principal plus interest on a 20-year bond would amount to approximately \$96,500 a year. The same amount

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of money borrowed by a small firm on a ten year term loan basis at a 15 percent rate would require principal and interest payments of \$193,000 a year -- double that of the firm with access to bond markets. Furthermore, the small firm does not have the same ability to pass along those increased costs to the consumer. The large firm with large production quantities and less than proportional regulatory costs can pass along its increased costs with a smaller increase in unit pricing. In other words, capital expenditures mandated by government regulation produce artificial "economies of scale."

It is also important to know which industry sectors are having the most difficulties with federal regulation and how serious these problems are. On the basis of the research in this report, it is clear that the manufacturing sector is particularly hard hit by the capital requirements of federal regulation.

In a survey of chemical specialties manufacturers conducted by the Center for the Study of American Business (89 respondents from a surveyed population of 225 firms), the increased operating expenses and capital expenditures required by the Environmental Protection Agency and the Occupational Safety and Health Administration were cited as being particularly troublesome. Fifteen percent of those firms having difficulty with EPA regulations (13 respondents) felt that the agency's regulations could cause the firm to close for an unspecified period. In addition, nearly 12 percent of these small chemical specialty manufacturers (10 respondents) felt that EPA regulations could cause a change in ownership of their firm.

A similar survey of the forging industry (a sample of 58 small firms in the industry) revealed that OSHA and EPA requirements could also cause

these firms to close for some period of time. Twenty-two percent of the forging firms felt that OSHA could cause such a closing and 17 percent felt that the EPA could have a similar effect. Similarly, a study done by Charles River Associates in 1977 for the Lead Industries Association indicated that OSHA air/lead regulations could force the closing of about 113 single-plant battery firms in this industry, made up of a total of only 143 firms.

In other instances, federal standards may have severe impact on the marketability of individual products. One example of this is the effects of energy conservation standards set by the Department of Housing and Urban Development and by the Farmers Home Administration. In rural states such as Wisconsin, the FHA rule could force 80 percent of the concrete block plants to close, according to a spokesman for the Wisconsin Concrete and Products Association.

Product bans also have a selective but devastating impact on small firms. This is particularly true because of the narrow product lines typically offered by a small firm. One cogent example of this impact was the ban of the chemical Tris by the Consumer Product Safety Commission. The small, family owned, independent cloth cutters and sewers were ultimately forced to pay for the recall of all Tris-treated sleepwear products -- a very heavy burden for these small firms. Furthermore, some forms of regulation, such as the Interstate Commerce Commission regulation of the trucking industry, clearly present barriers to entry by small firms. This protection of the approved carriers, of course, results in increased transportation costs to the firms using those approved carriers and ultimately to the consumer.

In an overriding sense, the adverse impact of the government's large paperwork burden is a qualitative matter. The very notion of paperwork is anathema to many small business people. The qualities of drive and independence that motivate a person to strike out as an entrepreneur can be hostile character traits when it comes to filling out bureaucratic reports. It is impossible to measure the disincentive to this independent spirit provided by federal regulation.

A variety of regulatory reforms in this area has been suggested, including: exemption from minor paperwork requirements, two-tiered regulations for small and large firms, small business impact statements, and even total exemption of small firms from regulation. The simplest reform measure would be for the regulatory agencies to weigh carefully the effects of their activities on business in general and small business in particular, prior to final rule setting. This procedure would require a change in outlook on the part of many regulators from their current attitude that small business is an unfortunate but necessary casualty of their mission to serve "the public interest."

It is clear that the variety of regulation calls for a variety of reforms. In some instances, dissemination of information rather than standards is needed, as in product safety. In other areas, reorientation of the regulatory agencies toward goals rather than requirements is what is required, as in the case of workplace safety. Virtually all regulatory programs would benefit from a more reasonable approach of weighing their costs and benefits and setting priorities among regulatory programs so as to

maximize the benefits derived. Some programs need to be specifically reviewed and revised by Congress to remove their impossible zero-risk requirements on American business. Reform of federal regulation is urgently needed to ensure the vitality of the small business sector of the American economy, as well as to assure other important national objectives.

INTRODUCTION*

This study seeks to document the many and various effects of federal regulation on small firms operating in a wide range of industries. The report contains six sections. The first section traces the logic for selecting a portion of American industry for study based upon a philosophy of focusing on the major impacts of federal regulation on small firms.

Succeeding sections (two through five) examine in detail how federal regulation may: (a) affect the very survival of the small firm, (b) constitute barriers to entry and innovation, (c) slow firm growth, and (d) absorb entrepreneurial energies in paperwork and its unanticipated "side effects." The sixth and final section is devoted to conclusions and recommendations.

FOCUSING ON THE MAJOR REGULATORY IMPACTS

Small firms represent a major portion of the number of firms in every industrial category, though obviously they do not account for a proportionate share of employment or sales in many of these categories.

*Note. This paper draws upon earlier research done in cooperation with Syracuse University as a part of a compendium of regional papers on small business for the Small Business Administration.

In the retail, wholesale, and construction sectors, small firms do account not only for a large percentage of the number of establishments but also for significant portions of the sales. Firms with fewer than 100 employees accounted for 59%, 76%, and 66% of retail, wholesale and construction sales, respectively, in the United States in 1972.¹

Industries Affected by Regulation

Before much can be said about the effects of regulation on small firms, two basic questions need answering: (1) "In which industry sectors is federal regulation perceived by small business to be causing the most problems?" and (2) "Which agencies seem to be causing these sectors the most difficulty?" The most comprehensive data available to answer such questions come from an unpublished survey of 28,000 small firms conducted by the National Federation of Independent Business (NFIB) in February 1978. Table 1 shows the high proportion of respondents that considered regulation to be a small business problem.

TABLE 1

Small Businesses Considering Regulation
To Be A Problem, By Industry Sector
(% of respondents)

Transportation	87.6%	Professions	73.2%
Manufacturing	84.8%	Finance	71.6%
Agriculture	83.6%	Retail Trade	68.9%
Construction	75.0%	Services	64.9%
Wholesale Trade	74.9%		

SOURCE: National Federation of Independent Business

Unfortunately, the NFIB survey included the Internal Revenue Service as a "regulatory agency." Since the IRS regulatory activity is ancillary to its basic function of revenue collection, it would be preferable to

exclude the problems caused by IRS activities from the survey data. However, it is impossible to determine from the NFIB data just what portion of the respondents considered the IRS to be the only agency causing small business problems. But some appreciation of the effect of including the IRS as a regulatory agency can be gained by looking at Table 2, which lists the firms finding a particular agency to have especially difficult regulations as a percent of those firms who said some agencies have more difficult regulations than others.

TABLE 2

Agencies Listed As Among Three Most Difficult
For Small Business By Sector and Agency*

	DEPARTMENT OR AGENCY									
	OSHA	EPA	IRS	WAGE/ HOUR	HEW	DOT	HUD	ICC	USDA	OTHER
Retail Trade	51%	28%	63%	37%						
Wholesale Trade	69%	37%	64%	27%						
Manufacturing	29%		50%				25%			59%
Construction	80%	34%	59%	34%						
Services	48%	30%	69%	25%						
Finance	95%	35%	59%	23%						
Transportation	47%					69%		61%		
Professions	32%	28%	93%		35%					
Agriculture	71%	84%	47%						39%	

*Firms responding that agency "X" has more difficult regulations than others as a percent of respondents who feel that some agencies have more difficult regulations than others.

SOURCE: National Federation of Independent Business

It seems reasonable to deduce from Table 2 that a major portion of the dissatisfaction of small business people in the professions, services, and wholesale and retail trade is due to IRS operations. Furthermore, the retail, wholesale, service and finance sectors appear to react strongly to the reporting burdens of OSHA. Therefore, it seems profitable to concen-

trate on the other sectors -- manufacturing, construction and transportation -- since these sectors appear to have difficulties with federal regulation beyond paperwork and reporting burdens. In addition, the chemicals and apparel industries will be examined within the manufacturing sector.

SMALL FIRM SURVIVAL

One of the most serious consequences of federal regulation of business is the threat to the continued existence of the small firm. In the manufacturing and construction industries, the most frequent source of this threat is the requirement for major capital expenditures to meet environmental or workplace safety standards. Less frequent but no less serious are regulations that reduce the market for a firm's product, such as an agency ban of a product or a performance standard that precludes the use of the product for its normal market application.

Debt Structure and Market Power

To understand fully the problems that a non-market demand for major capital expenditures can cause a small firm, we need to examine the typical debt structure of a small manufacturing concern. Table 3 shows the debt to equity ratios for manufacturing concerns by asset size. It is clear that small firms are carrying a **greater debt** load than the larger businesses.²

Furthermore, their higher debt/equity ratios and the particular reliance of small firms on relatively short term debt tend to make them poor candidates for increased debt incurred to meet regulatory requirements. The difference in annual borrowing costs for a large firm that has access to bond markets and/or equity markets versus a small firm which

relies on short term debt can be dramatic. Take a hypothetical example of a \$1 million loan for capital expenditures. The payments for principal and interest for a 10%, 20-year bond would be approximately \$96,500 a year. On the other hand, a ten year bank loan at 15% interest would require payments of \$193,000 a year -- double that of the hypothetical bond issue payments.³

TABLE 3
Corporate Debt/Equity Ratios of Manufacturing Concerns
By Asset Class--1972

Asset Size (thousands of dollars)	Debt/Equity	Asset Size (thousands of dollars)	Debt/Equity
<\$25	19.34	\$1,000-2,499	.81
\$25-49	2.23	\$2,500-9,999	.62
\$50-99	1.41	\$10,000-24,999	.58
\$100-249	1.13	\$25,000-99,999	.62
\$250-499	.91	>\$100,000	.69
\$500-999	.80		

SOURCE: Office of Tax Analysis, U.S. Department of the Treasury

The ability to pass along the increased costs of production resulting from mandated capital expenditures is of course inhibited by this differential cost of obtaining capital and the need to recapture it over the number of units produced. In a study done for the Small Business Administration, Charleswater Associates found that small firms expressed doubt in their ability to pass-through these increased costs.⁴ As shown in Table 4, three-fifths of the small businesses stated that they could pass-through less than one-fourth of their cost increases.

TABLE 4
 Ability of Small Firms
 To Pass-Through Cost Increases

	<u>Percent of Firms</u>
Very Little (less than 1/4)	59.8%
Some (1/4 to 3/4)	14.0%
Almost All (more than 3/4)	26.2%

SOURCE: U.S. Small Business Administration

Availability of Capital

Small Business Administration loan programs are designed to be of assistance primarily to the creditworthy customer. Loan programs are available for capital expenditures required by the Occupational Safety and Health Administration and the Environmental Protection Agency air and water pollution abatement and toxic substances regulations. For a myriad of reasons, not the least of which is the red tape required to obtain a loan, these programs are basically undersubscribed. For example, during the first five years of the SBA loan program for OSHA expenditures, only 156 firms borrowed \$31.3 million--.001 percent of the companies OSHA inspected and approximately 1% of the OSHA-related investment by larger firms of \$3.1 billion in 1975 alone.⁵

In addition, the SBA has the authority to guarantee pollution control bonds for an aggregation of small firms gathered together by an underwriter into a single bond issue. Each small business must pay the SBA a fee of 3½% of the total principal and interest along with an

underwriter's fee of 2% of the face value of the bond. The application process is tedious and expensive--a Los Angeles metal plater had \$15,000 out-of-pocket costs for a \$100,000 issue--but the net rate is reportedly more favorable than a typical bank loan for the smaller firms.

In spite of the sincere purpose of SBA loan guarantees, these loans are not a big factor in meeting the regulatory costs of small firms. The fundamental economics at issue, namely unit pricing advantages for the large firm with large production quantities and less than proportional regulatory costs, are not offset by these loan programs. In other words, capital expenditures mandated by government regulation produce artificial "economies of scale." Table 5, following, offers a numerical example of this problem.⁶

TABLE 5

Air Pollution Control Costs in Production Areas
Of Dry Process Crushed Stone Operation

	<u>CAPITAL</u>	
	<u>Small Plant</u> <u>400,000 Tons/Year</u>	<u>Large Plant</u> <u>1.5 Million Tons/Year</u>
Wet suppression equipment	\$36,516	\$43,416
Fabric filter equipment	<u>32,000</u>	<u>55,000</u>
Total Capital Cost	<u>\$68,516</u>	<u>\$98,416</u>
Annualized Capital Cost (12.5% of Capital)	<u>\$8,565</u>	<u>\$12,302</u>
	<u>OPERATING AND MAINTENANCE</u>	
Electricity at \$.04/kwh	\$2,075	\$ 5,312
Maintenance	<u>8,094</u>	<u>15,690</u>
Total O & M	<u>\$10,169</u>	<u>\$21,002</u>
Total Annualized Cost	<u>\$18,734</u>	<u>\$33,304</u>
Total Cost/Ton	4.7 cents	2.2 cents

SOURCE: U.S. Department of Labor, Occupation Safety and Health Administration.

Regulation-Induced Economies of Scale--Some Examples

Federal regulation affects small firms in a very selective manner. The public and their representatives are easily aroused by "widespread" complaints such as those caused by the nitpicking rules of the Occupational Safety and Health Administration and the sometimes petty citations of OSHA inspectors. There is a "large number," "major crisis" emphasis involved that may cause the public to pay little attention to the more serious problems that arise for small firms due to a particular regulation imposed on a single industry segment. It is the accumulation of these individual episodes that constitutes the "major" problem that federal regulation poses for small firms.

Chemical Specialty Firm Survey

We conducted a survey of chemical specialty firms to assess the burden placed on small firms in this highly technical field. This particular sector of the manufacturing industry is of special interest, moreover, because of the heavy burden of EPA's programs for air and water pollution, toxic chemical substances, and solid waste disposal, as well as OSHA health regulations. Truly it is a difficult regulatory environment for any firm, and more so for a small one.

The survey was sent to nearly 450 firms--large and small--that are members of the Chemical Specialties Manufacturers Association. The particular target group, however, was the fifty percent of these firms that employ less than 500 persons. One hundred thirteen firms returned questionnaires. Eighty-nine of these firms employ fewer than 500 people. Only the results from the small firms are reported in this study.

The Environmental Protection Agency was adjudged the agency with the most severe requirements sixty-two times, followed by the Food and Drug Administration and the Consumer Product Safety Commission which were singled out as the number one cause of problems eight times and six times respectively. Table 6 shows the small firm ranking of the federal regulatory agencies causing the most difficult problems in order of decreasing severity--the questionnaire presented fourteen choices and two blanks for "other" agencies. Table 6's ranking reflects the overall severity by creating a composite rank for each of the five most burdensome agencies--a ranking of 1 could be achieved only if all respondents listed the same agency as the number one problem agency. Thus, while the EPA is the most difficult agency for small chemical specialty firms, OSHA and the Department of Transportation are more difficult overall than the CPSC or the FDA.

TABLE 6
Ranking of Five Federal Regulatory Agencies Having
The Most Impact on Chemical Specialty Firms

<u>Agency</u>	<u>Composite Rank*</u>
Environmental Protection Agency (EPA)	1.6
Occupational Safety & Health Administration (OSHA)	3.2
Department of Transportation (DOT)	4.2
Consumer Product Safety Commission (CPSC)	4.3
Food and Drug Administration (FDA)	4.7

*Composite rank is calculated as follows:

$$\text{Composite rank } j = \sum_{i=1}^n \text{rank}_{ij} / \text{total number of firms}$$

where,

$$\text{rank } ij = \begin{cases} 1,2,3,4,5 & \text{if respondent } i \text{ ranked agency } j \\ & \text{as 1st, 2nd, etc.} \\ 6 & \text{if agency } j \text{ was unranked by respondent} \end{cases}$$

SOURCE: Center for the Study of American Business.

Furthermore, the questionnaire respondents were asked how these federal agencies affected them--increased paperwork, increased operating costs or increased capital costs. Table 7 below shows that for these five most difficult agencies the major burden was operating costs.

TABLE 7

Nature of Burden on Small Chemical Specialty Firms Posed By
Five Most Difficult Agencies

Percent of Firms*

<u>Agency</u>	<u>Paperwork</u>	<u>Operating Expenses</u>	<u>Capital Expenditures</u>
EPA	36.0%	53.5%	20.9%
OSHA	29.9%	41.6%	35.1%
DOT	35.0%	61.7%	3.3%
CPSC	33.3%	56.9%	11.8%
FDA	42.1%	44.7%	10.5%

*Includes only small firms which ranked the agency in one of the top five categories. If more than one category of burden was checked, an observation was counted for each.

SOURCE: Center for the Study of American Business

In order to determine which agencies, if any, pose a life and death threat to these firms, they were asked "Please check those agencies, if any, which may force a change in ownership or a closing of your firm based upon current or proposed regulations." Fifteen percent of the firms that ranked the EPA in the top five felt that its regulations could force a closing of the firm of unspecified duration, and twelve percent felt it could cause a change in ownership, while seventy-three percent did not check either of these responses. Since

all of the firms responding are ongoing concerns, the results shown in Table 8 are a reflection of their perception of the future, rather than a description of the recent past.

TABLE 8

Regulatory Effects on Ownership of Small Chemical Specialty Firms For Five Federal Agencies With Most Difficult Requirements

Percent of Firms*

<u>Agency</u>	<u>Close the Firm</u>	<u>Change of Ownership</u>	<u>No Response</u>
EPA	15.1% (13)	11.6% (10)	73.3% (63)
OSHA	6.5% (5)	1.3% (1)	92.2% (71)
DOT	0% (0)	0% (0)	100.0% (60)
CPSC	9.6% (5)	1.9% (1)	88.5% (46)
FDA	7.9% (3)	2.6% (1)	89.5% (34)

*Percent is the number of respondents who checked "close the firm" or "change in ownership" divided by the number of respondents ranking the agency as one of the five most difficult. The raw count is in parenthesis.

SOURCE: Center for the Study of American Business

A quantitative measure of severity was sought by asking for annual operating costs and capital expenditures of the firms to meet the mandates of each agency. Table 9 shows these estimates for the five agencies with the most severe requirements. As may be seen by the frequency figures in the table, a significant number of respondents did not supply these cost estimates due to unavailability of the data or possibly due to zero costs--extensive follow up would be required to determine true cost figures for those not providing this information. The averages for CPSC and FDA annual operating costs and capital expenditures are

especially affected by the small number of responses--few firms fall under the FDA jurisdiction, but those that do have significant compliance costs.

TABLE 9

The Cost To Chemical Specialty Firms For Federal Regulatory Programs For The Five Most Difficult Agencies

Average Cost Per Firm*

<u>Agency</u>	<u>Number of Responses</u>	<u>Annual Operating Costs</u>	<u>Number of Responses</u>	<u>Capital** Expenditures</u>
EPA	31	\$ 95,806	18	\$268,056
OSHA	19	29,474	18	122,222
DOT	15	23,011	4	27,500
CPSC	15	8,489	10	5,300
FDA	10	86,893	4	362,500

*Average in either of the two cost areas is calculated only for those firms providing a figure.

**Capital expenditures are averaged for each firm providing a figure and may cover more than a single year of expenditure.

SOURCE: Center for the Study of American Business

The survey results clearly demonstrate that the effects of regulatory activity on small business vary greatly by agency. Clearly, the impact of the EPA and OSHA are particularly severe for small chemical specialty firms.

Impacts on Other Industries

One of the better documented cases of the adverse impact of federal regulation on a large number of small firms is furnished by the foundry industry. This industry is composed of approximately 4,200 foundries; 82 percent of these firms employ fewer than 100 people and 75 percent

employ fewer than 50 persons. The total industry employs approximately 375,000 workers.⁷ In the late 1960s this industry began to lose small plants, those that specialized in small orders of less than 500 pieces a year, due to the combined effects of economic recession and EPA regulation. The castings produced by these foundries are critical for production of limited quantity capital equipment. The size of the mandated EPA emission control expenditures for many of the foundries exceeded the net worth of the entire operation. In the period 1968 through 1975 there were 350 verified foundry closings. Table 10 summarizes the results of a follow-up study conducted to determine the causes of these foundry closings. Thirty-four percent of the 158 concerns responding cited EPA regulations to be partly or totally to blame for the closing of the firm.⁸

TABLE 10
Causes of Foundry Closings 1968-1975

<u>Year</u>	<u>EPA in Part or Total</u>	<u>Labor or Skills</u>	<u>Bankrupt or Economics</u>	<u>Consolidations</u>	<u>Death of Principal</u>	<u>Unknown</u>	<u>Total</u>
1968-69	1	1	7	1	4	22	36
1970	6	3	8	4	2	52	75
1971	14	1	22	5	1	74	117
1972	14	9	13	3	2	28	69
1973	7	1	5	2	-	4	19
1974	11	1	5	2	-	9	28
1975	<u>1</u>	<u>-</u>	<u>1</u>	<u>1</u>	<u>-</u>	<u>3</u>	<u>6</u>
Total	54	16	61	18	9	192	350
% of Total Excluding Unknown	34%	10%	39%	11%	6%	-	-

SOURCE: Modern Castings Market Insight, 1975

In the summer of 1979 we surveyed a sister industry of the foundry industry--the forging industry. Using a survey nearly identical to the one used for the chemical specialties manufacturers, and with the help of the Forging Industry Association, 68 forging firm surveys were returned (30% of the membership), with 58 of these from firms employing fewer than 500 employees.

The Occupational Safety and Health Administration was ranked the most difficult agency by 57 percent of these firms and received a composite rank of 1.8. The EPA was considered most difficult by 12 percent of the firms and had a composite rank of 3.4. The Department of Energy was considered the most difficult by 14 percent of the firms, but had a composite rank of 4.4. This result implies that the DOE is not a major source of difficulty for the industry as a whole, but is considered the major problem by a significant segment of survey respondents.

One of the most interesting pieces of information contained in Table 11 is the high percentage of small forging firms that believe OSHA and EPA could cause the firm to close for some period of time--22 percent and 17 percent, respectively. Furthermore, these firms attributed the source of their difficulties with OSHA and EPA to increased capital expenditures and increased operating costs. In particular, OSHA-mandated capital expenditures have exceeded \$257,000 on average, and EPA capital requirements have required an average cumulative expense of nearly \$328,000. The regulatory impact in this vital industry segment is truly a current problem and not a thing of the past.

TABLE 11

Federal Regulatory Agencies Causing The
Most Difficult Problems For Small Forging Firms

AGENCY	Percent Ranking Agency Most Difficult	Agency's Composite Rank ^a	Firms Indicating Possible Owner- ship Changes ^b		Average Annual Operating Costs	Average Capital Expenditures ^c
			Change Owners	Close Firm		
Occupational Safety & Health Administration	57%	1.8	3% (2)	22% (13)	\$ 36,500 (15)	\$257,200 (13)
Environmental Protection Agency	12%	3.4	0% (0)	17% (10)	\$ 28,900 (9)	\$327,600 (14)
Equal Employment Opportunity Commission	3%	4.1	2% (1)	3% (2)	\$ 10,300 (12)	\$ 27,000 (1)
Department of Energy	14%	4.4	2% (1)	5% (3)	\$225,000 (5)	\$132,400 (5)
Council on Wage and Price Stability	3%	4.9	2% (1)	2% (1)	\$ 2,200 (3)	-- (0)

(a) Composite rank $j = \frac{\sum_{i=1}^n \text{rank}_{ij}}{\text{total number of firms where,}}$

$\text{rank}_{ij} = \begin{cases} 1,2,3,4,5 & \text{if respondent } i \text{ ranked agency } j \text{ as} \\ & \text{1st, 2nd, 3rd, et cetera.} \\ 6 & \text{if agency } j \text{ was unranked by respondent.} \end{cases}$

(b) Percent is percent of total 68 respondents. Number inside parentheses is the frequency of response.

(c) Capital expenditures are totaled over all years and then averaged for the number of firms providing cost estimates.

SOURCE: Center for the Study of American Business, Washington University.

The impact of proposed standards for air-lead exposure levels of 100 micrograms per cubic meter promulgated by the Occupational Safety and Health Administration was examined in a study for the Lead Industries Association done in 1977 by Charles River Associates. This consulting firm estimated that the total compliance cost for the lead industry would be approximately \$416 million (in 1976 dollars), with annual costs of \$112 million. The predicted result in the battery industry, which is made up of 143 firms, was that

...much larger unit production costs would arise for smaller plants than for larger plants. Because of large differential costs and the fact that battery prices would only rise to cover the unit costs of the larger firms...the smaller plant operators would be forced to absorb the differential in costs. In many cases the amount absorbed would eliminate entirely the plant's profitability and about 113 single plant battery firms would be forced to close ...eliminating half of the productive capacity not operated by the five major battery companies.⁹

The final OSHA standard was even more severe, 50 micrograms per cubic meter.

Regulation-Induced Market Alterations

In some instances federal regulation has a direct impact on the marketability of individual products. Once again, small firms are hit hardest by product bans or product standards due, in part, to their reliance on narrow product lines.

For example, in an effort to encourage homeowner energy conservation, the Department of Housing and Urban Development issued standards for single and two-family homes. The National Concrete Masonry Association vigorously opposed the regulations on behalf of its 800 member

manufacturing plants since they believed the standards discriminated against the masonry industry. All of these plants are locally owned and employ from 30 to 50 people each. Though the association calculated that the energy savings produced by this standard were not cost effective in their application to masonry--that is, the added cost of insulation required to meet the standard could not be regained in energy savings during the life of the home--the only relief suggested by HUD was the possibility of local exceptions to the standards.¹⁰

In March 1977 the Farmers Home Administration issued a similar set of regulations covering the construction industry. A spokesman for the Wisconsin Concrete and Products Association stated that the FmHA requirements--a "U" value of .07 for walls--would "effectively put most of the block plants in Wisconsin out of business" since 80% of those plants not only service the farm market but depend on this market for 75% of their business.¹¹

An example of a specific product prohibition having a major impact on a select group of small firms is the Consumer Product Safety Commission's ban on the chemical Tris as a flame retardant in children's sleepwear. The effect of the Tris ban on the small, family-owned independent cloth cutters and sewers was critical. While the commission felt it had no alternative but to ban the use of a carcinogen in children's sleepwear, the equity of placing the full economic burden on the sleepwear manufacturers for recalling the huge inventory of Tris-treated products already in the market was seriously questioned by the American Apparel Manufacturers Association. A plan was worked out to distribute the economic impact across the industry that is broadly responsible for the

development and use of Tris in children's sleepwear. However, the textile mills were exempted in July of 1978 from any responsibility to buy back Tris-treated material, which was unfortunate from the viewpoint of the smaller processing companies.

In this regard, the mayor of Cohoes, New York testified before the Committee on Small Business of the House of Representatives that the Tris product recall could force the closure of Swanknit Corporation, which employs 150 people in Cohoes and has a total payroll of nearly \$1 million. The mayor suggested that since the CPSC had first indicated that material treated with Tris met the flammability standards set by the CPSC, the federal government should purchase the inventories of treated sleepwear.¹² President Carter subsequently vetoed legislation that would have provided government funds to reimburse the manufacturers for their estimated losses of nearly \$51 million due to the Tris ban,

Swanknit was able to survive the repurchase of its \$450,000 in treated sleepwear due to the willingness of its two major customers to agree to a three year payback as well as the agreement of their local bank to provide a loan to carry them through this difficult period. Sleepwear manufacturers are now using 100% polyester material which meets a "relaxed" CPSC flammability standard.¹³

The 1973 mattress flammability standard promulgated by the Federal Trade Commission has produced a differential distributive impact in the mattress industry, according to a 1979 study by Dr. Peter Linneman of the University of Chicago.¹⁴ Table 12 shows the estimated impact of the regulations in terms of an intra-industry redistribution of sales

and profits. The smaller companies (those with sales of less than \$548,000) suffered losses, on the average, of annual sales of \$42,000 and net income of \$5,000.

The irony is that 90% of the mattress manufacturers have met the flammability standard by using a polyurethane topper pad. The polyurethane will extinguish a cigarette burning at 900 degrees but burns with the intensity of napalm at 1400 degrees and emits a variety of noxious gasses--carbon monoxide, nitrogen oxide and cyanide.¹⁵

TABLE 12

Intra-Industry Impacts of the 1973
Mattress Flammability Standard

<u>Size Category in Terms of Annual Sales</u>	<u>Changes in Average Sales</u>	<u>Changes in Average Pre-Tax Net Income</u>
Firms with Sales \$0-\$548,000	\$ -42,000	\$ -5,000
Firms with Sales \$548,000-\$1,000,000	40,000	-18,000
Firms with Sales \$1,000,000-\$2,300,000	120,000	3,000
Firms with Sales Over \$2,300,000	1,900,000	18,000

SOURCE: Peter Linneman, A Case Study of the Impacts of Consumer Safety Standards: the 1973 Mattress Flammability Standard, March 1979.

REGULATORY EFFECTS ON ENTRY AND INNOVATION

The classic theory that regulation results in barriers to entry is applicable for one-industry type regulation such as the Civil Aeronautics Board, the Federal Communications Commission, and the Interstate Commerce Commission. The relationship of the regulated to the regulators in these circumstances has become so intimate that economists have postulated the "capture theory" to describe it. The essence of this theory is that the regulators deal so exclusively with industry leaders and their problems that they become "captured" by them. Theories of "cartel by design" are offered to explain the very reason for the formation of a regulatory agency in the first place. Whatever view is taken regarding why such agencies were ever formed, or whether they regulate or are "captured," the fact remains that they do prevent entry of new firms into the regulated industry.

The ICC regulation of the trucking industry is the most obvious case of governmentally erected barriers to entry of small firms-- that is, independent truckers. One recent piece of evidence showing that the supply side of the market is being constrained to the detriment of the consumer is shown in Table 13. The table shows that the rate charged by a household mover to transport a 7,000 pound shipment 125 miles is significantly lower if the move is in the competitive environment of intrastate trucking in Maryland than in the ICC regulated environment of interstate trucking. The rate-setting practices of the ICC resulted in rates that were 26.6% to 67.2% higher.¹⁶

Of course, the ICC approval procedure presents the overt barrier to entry, but the covert barrier is the implicit assumption of the ICC that the best means of providing service to shippers is via already approved carriers. The Commission has taken the position that:

It has been consistently held that existing carriers should be afforded the opportunity to transport all the traffic which they can handle adequately, economically and efficiently in the territory they serve before a new service is authorized.¹⁷

TABLE 13

Intrastate and Interstate Moving
Costs for 7,000-Pound 125-Mile Shipment

	<u>Intrastate Rates (averages)</u>	<u>Interstate Rates</u>	<u>Difference</u>
<u>All Movers</u>			
From Baltimore- September 1973	\$319	\$461	+44.5%
March 1974	382	533	+39.5%
From Maryland suburbs of Washington, D.C.- September 1973	351	552	+57.3%
March 1974	381	637	+67.2%
<u>Interstate Movers Only</u>			
From Baltimore- September 1973	\$325	\$461	+41.8%
March 1974	421	533	+26.6%
From Maryland suburbs of Washington, D.C.- September 1973	395	552	+39.7%
March 1974	468	637	+36.1%

SOURCE: American Enterprise Institute, 1978

Supporting the assertion that ICC regulations act as barriers to entry is the General Accounting Office's analysis of 217 applications for temporary authority that were among the 1200 denied in 1976 (approximately 31 percent of all such requests). The GAO report noted

that protestors frequently submitted "'form' or 'boiler plate' protests using the same language in each case."¹⁸ This report concludes with the statement:

ICC places a heavy burden on the applicant trucker and his supporting shipper(s) to show that authorized truckers are incapable of providing the needed service. Meanwhile, authorized truckers are not required to clearly demonstrate their willingness and ability to meet the specific needs of the shipper(s).¹⁹

All in all, each new regulation from each agency seems to pose a special problem for a small firm somewhere in the economy. One example of this phenomenon is furnished by the proposed regulations on radiology equipment promulgated by an office within the Food and Drug Administration known as the Bureau of Medical Devices and Diagnostic Products. Dr. William Tuddenham describes the likely impact of these regulations as follows:

These controls effectively impede the development of experimental devices and equipment, even of a trivial sort, and by virtue of the "Regulations Establishing Good Manufacturing Practices" they essentially "freeze out" the small manufacturer of specialty products.²⁰

Moreover, the premarket approval procedures to be promulgated under the new Toxic Substances Control Act of 1976 may make new product development extremely costly for small firms. The consulting firm of Foster D. Snell, Inc. prepared a study of the potential impacts of TSCA on the chemical industry. This report forecasts the following results for small firms for extensive testing of new substances:

- 1) Small firms would need to triple innovation expenditures to maintain their present rate of new product introductions. The cost pass-through would effectively price the small firms out of business.

- 2) At current levels of R & D expenditures, the small firm new product introductions would decline 80 to 90%, which would also, in effect, put many of them out of business,²¹

EFFECTS ON GROWTH

As a small firm grows it must obtain capital from other than short term bank financing or from SBA loans in order to achieve the status of a "middle" sized company. The role of the Securities and Exchange Commission as the federal protector of the investing public has led it to establish a myriad of rules and regulations for corporate financial reporting. The table below shows the estimated cost of flotation of public and private debt issues by size of the issue. The difference in the two types of issues indicates, in part, the added cost of meeting requirements imposed by the Securities and Exchange Commission and ancillary accounting and legal costs associated with public offerings. It is clear that small firms (small issues), whether private or public, bear disproportionately high costs, and that SEC requirements greatly compound those costs.²²

TABLE 14
Costs of Stock Issues as a Percent
of Proceeds by Size of Issue

Composite for 1951, 1953, and 1955

<u>Size of Issue</u>	<u>Publicly Offered</u>	<u>Privately Placed</u>	<u>Difference</u>
\$ 500,000 - 900,000	10.24%	2.14%	8.10%
1,000,000 - 1,900,000	8.00	1.52	6.48
2,000,000 - 4,900,000	3.33	1.12	2.21
5,000,000 - 9,900,000	1.53	.83	.70
10,000,000 - 19,900,000	1.44	.63	.81
over 20,000,000	1.22	.44	.78

SOURCE: American Enterprise Institute

The recent record of the SEC, however, tends to place that agency among the leaders in regulatory reform on behalf of small firms. The Commission has revised Regulation A, which provides a reduced paperwork burden, so that it covers issues up to \$1,500,000 instead of the earlier ceiling of \$500,000. In March 1979 the SEC announced that companies with less than \$1 million in assets and fewer than 500 shareholders that had not previously registered securities could use an abbreviated form to offer as much as \$5 million in stock. Furthermore, up to \$1.5 million of the offering can be from existing shareholders, thus giving venture capital investors a chance to cash in their investments.²³

Also in March 1979 the SEC revised its rules on the resale of restricted securities after a three year holding period by shareholders who aren't affiliated with the firm. This change allows venture capital investors to liquidate their investments after a reasonable holding period.²⁴

SEC reforms offer some of the few bright spots in the regulatory outlook. But this favorable news is counterbalanced by other regulatory programs such as the Employee Retirement Income Security Act (ERISA), which has produced an unanticipated side effect that adversely affects the availability of venture capital for small firms. Pension funds (with their \$212 billion in assets as of May 1978) have been extremely reluctant to invest in small firms due to the "prudent" man rule and its severe penalties for "imprudence." These pension fund managers have therefore concentrated on the "seasoned" issues of established larger companies. Recently the availability of venture capital for small businesses has seemed to be on the rise due to a combination of

the 1978 reduction in the federal capital gains tax and a Labor Department guideline suggesting that 'pension-fund managers could invest in a certain number of new ventures and still live up to their fiduciary responsibilities."²⁵ This new guideline still lacks clarity and authority, however.

Small business investment companies (SBICs) are meant to be the federal government's response to the small firm's need for venture capital. Several restraints on the SBICs make it difficult for them to provide true venture capital to small firms, however. Though the SBA will loan an SBIC up to \$4 for each \$1 of private capital, the SBIC must pay interest in excess of Treasury note rates on that debt. SBICs must charge high interest rates, in turn, to finance those payments to the SBA. All these facts imply that SBIC investment in the small firm will be in the form of interest bearing debt rather than in debentures or common stock. New small firms in particular can rarely make high interest payments.²⁶

PAPERWORK AND ENTREPRENEURIAL ENERGY

Many burdens of federal regulation on small firms are of a paperwork or reporting variety. The small firm, unlike its large firm counterpart, does not have a professional staff to respond to these requirements. Often the owner/entrepreneur is the only individual with sufficient knowledge to respond to an agency's requirement for information.

An example of the difficulty encountered by small firms can be seen by the workings of the Toxic Substances Control Act. Although Congress intended to shield small businesses from much of the paperwork burden, the proposed regulations define "small manufacturer or processor" as a single-plant manufacturer with annual sales less than \$100,000 or with production less than 2,000 pounds annually. Under that ruling, a firm such as the Harwicke Chemical Company in Elgin, South Carolina, is classified as a big business. Harwicke has less than 75 employees and produces \$9 - \$11 million in annual sales out of a single-plant facility. Harwicke's sales manager has become the regulatory expert since he is the only employee besides the president who even holds an advanced degree in chemistry.²⁷

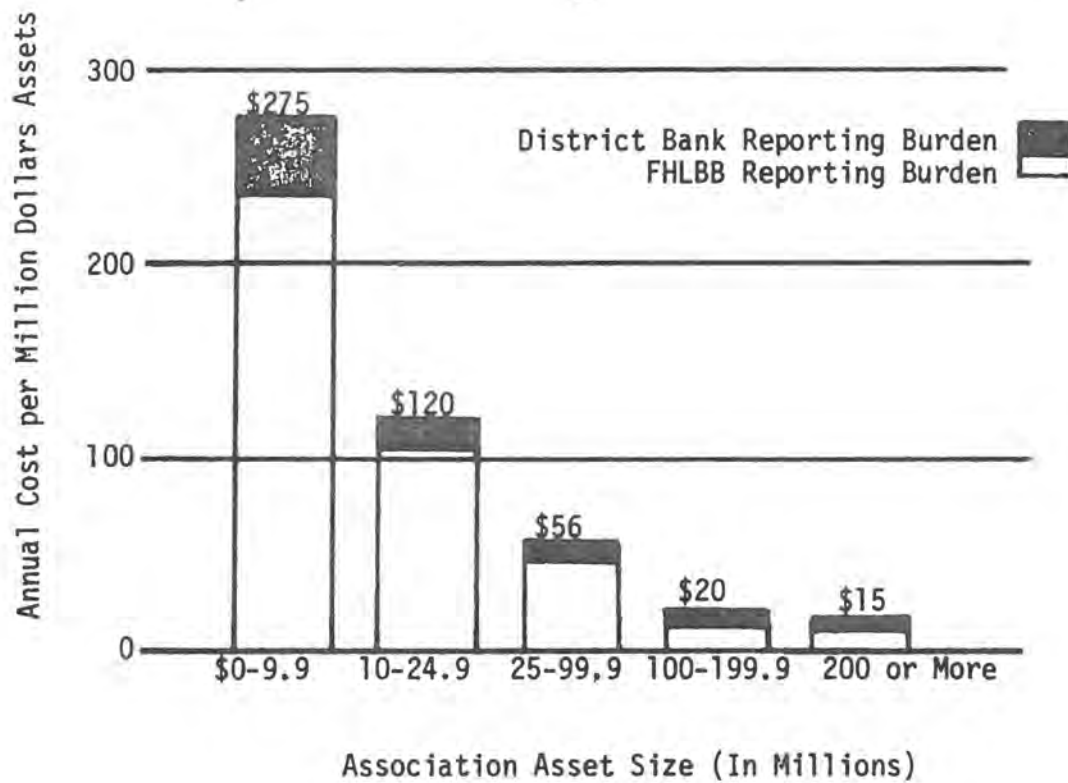
Another example of the paperwork burden on small firms involves the Bureau of Motor Carrier Safety of the Department of Transportation. This agency requires a report called the "Drivers Daily Log" that is both burdensome and seemingly unproductive. During the June 1979 truckers' strike, every major television network carried interviews with independent truckers who said that they cannot earn a living without perjuring themselves on this report. An estimated 1½ million truck drivers must file the daily log forms in order to account for their activities for every hour of every day, whether on or off duty. The carrier must file a copy of this form for each of his drivers for at least a year--a half billion forms in all. As a result of all this record keeping, about three to four hundred log violations are successfully prosecuted each year.²⁸

Reporting costs, like the other more severe burdens of federal regulation, are not proportional to the size of the firm. For example, Figure 1 shows the differential reporting burden for savings and loan institutions as a function of asset size. A savings and loan institution with less than \$10 million in assets has over 13 times the cost per million dollars of assets as that of a savings and loan in the \$100 - 199.9 million asset range.²⁹

The funding and reporting requirements of the Employee Retirement Income Security Act have also produced undesirable results for small business and employees of small firms. The Pension Benefit Guarantee Corporation (PBGC) has reported that 7,300 pension plans were terminated in 1976, 4,300 were terminated in 1975 and 3,092 in 1974. As a pre-ERISA comparison, 722 plans were terminated in 1967.

The Subcommittee on SBA and SBIC Legislation and General Small Business of the Committee on Small Business of the House of Representatives sent 7,185 questionnaires to firms that notified the PBGC of intentions to terminate pension plans during June 1976 through April 1977. Table 15 clearly demonstrates that it was the small firms that were most affected--99.7% of the terminations were for plans with fewer than 400 participants. Seventy-nine percent of the plan participants were members of plans with fewer than 400 participants.³⁰

FIGURE 1
 Savings and Loan
 Annual Reporting Cost Burden Per Million
 Dollars Assets By Association Asset Size



Source: Federal Home Loan Bank Board Journal, March 1977.

TABLE 15

Pension Plan Terminations
June 1976 - April 1977
By Plan Size

<u>Plan Size</u> (number of participants)	<u>Number of</u> <u>Plans</u>	<u>Pension Plan Participants</u> <u>Average Number</u> <u>of Plan</u> <u>Participants</u>
1 to 10	1,008	5
11 to 25	341	17
26 to 50	157	36
51 to 99	65	69
100 to 199	32	129
200 to 399	19	272
400 and over	<u>5</u>	1,593
Total	1,627	

SOURCE: House Committee on Small Business

This same survey found that 77% of the respondents indicated ERISA had an impact on their decision to terminate their pension plans ranging from "some effect" to the sole reason for termination. Fifty-five percent attributed a "very great effect" or the "only reason" for termination to ERISA.

The respondents who indicated that ERISA had some effect on their decision to cancel their pension plans were asked to indicate to what extent increased costs due to ERISA were responsible for their decisions.

Eighty-seven percent of this group indicated that increased costs due to ERISA had an effect ranging from "some effect" to the sole cause.³¹ Average administrative costs per plan were estimated to be more than \$2,300 higher after ERISA--\$3,454 versus \$1,102--and benefit costs were estimated to be, on average, \$23,800 higher--\$46,630 versus \$22,824. In addition, the survey respondents estimated ERISA-related initial costs of \$2,695.³²

In an overriding sense, the adverse impact of the government's large paperwork burden is a qualitative matter. The very notion of paperwork is anathema to many small business people. The traits of drive and independence that cause a person to strike out as an entrepreneur can be hostile character traits when it comes to filling out bureaucratic reports. It is impossible to measure the disincentive provided by federal regulation to this independent spirit.

CONCLUSIONS AND RECOMMENDATIONS

The fact that federal regulation has a disproportionately adverse impact on small firms is borne out by the myriad of specific industry examples presented in this study. The examples are representative of the larger whole. Regulation's effects range from life threatening, due to increased capital costs or market alterations, to merely burdensome, as in the case of paperwork requirements.

Proponents of increased federal regulation of business activity occasionally make extravagant claims for the benefits of regulation for business itself. To be sure, if OSHA regulations would produce fewer workplace accidents, firms and their employees would both benefit. In addition, some firms have surely found new or expanded markets for safety consulting services and pollution control equipment as a result of regulation. Very little documentation of these benefits to small firms exists, however.

The survey that we conducted of the small chemical specialty firms contained one question intended to determine what benefits these firms have experienced due to regulation. Of the total small firm respondents, 9% indicated that new markets had opened up as a result; 13% cited

improved product quality as a benefit; 6% had installed better production processes as a result; and 72% stated that no positive benefits have accrued to the firm as a result of regulation.

The federal government's response to the difficulties caused by regulation has consisted primarily of three basic approaches: (1) to generate government guaranteed or government financed loan programs for small firms, (2) to establish small business offices within the regulatory agencies, and (3) to hold hearings on specific industry and agency problems. The first approach has limited effectiveness, as mentioned earlier, since the ability of the small firm to repay such loans and to pass along increased costs to consumers is much less than its large firm competition. The second approach can have a minor impact, if the agency administrator is sympathetic to the problems of small business; but it merely provides window dressing if the administrator is unsympathetic.

While hearings do demonstrate Congressional concern with the regulatory burden on small business, they merely add to the frustrations of entrepreneurs who invest their time testifying if they do not, in turn, result in legislation that deals with the causes of these problems. The special legislation passed to relieve the financial burden of the makers of Tris-treated sleepwear was unusual. Unfortunately, as a result of the President's veto, no relief from the financial hardships imposed by the Tris ban was given to the small cloth cutters and sewers involved.

A variety of regulatory reforms has been suggested, including: exemption from minor but bothersome paperwork requirements, two-tiered regulations for small and large firms, small business impact statements, and even the total exemption of small firms from regulation.³³ The latter suggestion is not really viable in many situations. Surely small firms should participate in efforts to improve workplace safety or to improve the air and water quality of the communities in which they do business. In fact, some of the concerns that give rise to regulation are especially noticeable in small business.

In August 1979, House-Senate conferees voted unanimously to reduce the record-keeping and inspection burden imposed by the Occupational Safety and Health Administration on many of the smallest firms. Employers of ten or fewer persons conducting business in low-injury-rate industries would be exempt from these requirements under a rider attached to a Labor Department appropriations bill for the fiscal year 1980.³⁴ This specific reform measure is an example of the congressional action that can result when a regulatory agency is unresponsive to the need for reform.

In contrast, the simplest reform measure would be for the regulatory agencies to carefully weigh the effects of their activities on business in general and small business in particular prior to final rule setting. This procedure would require a change in outlook on the part of regulators from the current attitude that small business is an unfortunate but necessary casualty of their missions to serve "the public interest."

Unfortunately, all these exhortations and calls to regulators to change their ways will not produce any results without a variety of substantive legislative actions aimed at regulatory reform. The survey of

the small chemical specialty firms presented a wide variety of suggested reforms which the respondents ranked according to their views of the effectiveness of the measures. Though they were given the opportunity to choose proposals extremely favorable to small business, such as exempting all small business from regulation or from government paperwork, only three percent ranked these self-serving responses as the most desirable regulatory reform measure.

The degree of preference of these small firms for legislative reform is demonstrated in Table 16. Legislative "sunset" provisions for

TABLE 16
Reform Measures Favored
By Small Chemical Specialty Firms

<u>Measure</u>	<u>Composite Score*</u>	<u>% Firms Ranking Proposal First</u>
Sunset legislation	2.4	27%
Legislative requirement for regulatory benefits in excess of cost	2.5	35%
Legislative veto for all new regulations	3.1	17%
Two-tiered regulation	3.4	7%
Establish small business offices within regulatory agencies	3.6	5%
Require SBA Office of Advocacy's review of proposed regulations	3.8	1%
Exempt small business from regulatory paperwork	3.8	1%
Other	3.8	2%
Remove all forms of federal regulation	3.9	2%
Exempt small business from all regulations	3.9	2%

*Composite score is calculated as follows:

$$\text{Composite score} = \frac{\sum_{i=1}^n \text{rank}_{ij}}{\text{total number of respondents}}$$

where,

$$\text{rank}_{ij} = \begin{cases} 1, 2, 3 & \text{if respondent } i \text{ ranked measure } j \text{ 1st, 2nd or 3rd} \\ 4 & \text{if measure } j \text{ was unranked by respondent} \end{cases}$$

SOURCE: Center for the Study of American Business

federal regulatory agencies and cost/benefit reform with legislative "teeth" were favored, with the legislative veto approach and two-tiered regulations also favorably ranked. Less formal reform measures were not considered to be effective, as can be seen from the rankings of the proposals for establishing small business offices within regulatory agencies and for strengthening the role of the SBA's Office of Advocacy.

It is clear that the variety of regulation calls for variety of reforms. In some instances, information rather than standards are needed as in product safety. In other areas, reorientation is required toward goals rather than requirements such as those for workplace safety. Virtually all regulatory programs would benefit from a more reasonable approach to weighing their costs and benefits and to setting priorities among regulatory programs so as to maximize the benefits derived. Some programs should be reviewed and revised by Congress to remove their impossible zero risk requirements, such as those required in the Delaney Amendment to the Food, Drug and Cosmetic Act.

In short, the issue of reforming government regulation is not merely a technical matter. In large measure, the vitality of the small business sector of the American economy is at stake.

FOOTNOTES

1. NFIB Fact Book on Small Business (Washington, D.C., National Federation of Independent Business, February 1979), p. 50-57.
2. J. McKeivitt, Testimony Before the Subcommittee on Administrative Practice and Procedure of the Committee on the Judiciary of the United States Senate (Washington, D.C., October 7, 1977), p. 59.
3. This example, though purely hypothetical, was constructed using rates of interest that are realistic for the January 1980 time frame. The bank loan alternative is conservative in that a typical small firm might well be required to pay a percent and a half over the prime rate of 15% used and could well be required to accept a shorter term than 10 years. Further complexities of requirements for compensating balances, etc., have been omitted from this example.
4. The Impact on Small Business Concerns of Government Regulations That Force Technological Change, Small Business Administration, prepared by Charleswater Associates (Boston, Massachusetts, September 1975), p. 135.
5. Occupational Safety and Health Administration's Impact on Small Business, U. S. Department of Labor (Washington, D.C., July 1976), p. 19.
6. Ibid., Table B-1.
7. R. Walk, "Foundries: An Industry in Crisis?" Modern Castings Market Insight, publication No. 734, 1975, p. 1.
8. R. Walk, "Analysis of Shipment Trends and Foundry Closings in the U.S.," Modern Castings Market Insight, publication No. 739 (March 31, 1975), Exhibit IV, p. 1.
9. Economic Impact of Proposed OSHA Lead Standards, Charles River Associates, Inc. (Cambridge, Massachusetts, March 1977), p. 15.
10. D. Van Ess, Testimony Before the Select Committee on Small Business of the United States Senate (Madison, Wisconsin, June 1, 1977), p. 87-89.
11. R. Walter, Effect of Government Regulation Upon Homebuilding and Related Construction, Testimony Before the Select Committee on Small Business of the United States Senate (Madison, Wisconsin, June 1, 1977), p. 98.
12. Summary of Activities of the Committee on Small Business of the House of Representatives (Washington, DC, January 2, 1979), p. 134.
13. Telephone conversation with Mr. Williams, Vice President of Swanknit, July 1979.

14. P. Lenniman, A Case Study of the Impacts of Consumer Safety Standards: the 1973 Mattress Flammability Standard (Chicago: the University of Chicago, Center for the Study of Economy and the State, March 1979), p. 28.
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16. D. Breen, "Regulation and Household Moving Costs," Regulation (September/October 1978), p. 53.
17. T. Moore, "The Beneficiaries of Trucking Regulation," Journal of Law and Economics, Vol. 21 (October 1978), p. 328.
18. New Interstate Truckers Should be Granted Temporary Operating Authority More Readily, Report to the Congress by the Comptroller General of the United States, CED-78-32 (February 24, 1978), p. 15. The ICC has sought to modify the circumstances under which carriers can oppose licensing applications since 1978. However, no estimates of the effect of these changes is presently available to our knowledge.
19. *Ibid.*, p. 24.
20. W. Tuddenham, M.D., "Quality Assurance in Diagnostic Radiology: An Irreverent View of a Sacred Cow," Radiology, Vol. 131 (June 1979), p. 586.
21. Foster D. Snell, Inc., Study of the Potential Economic Impacts of the Proposed Toxic Substances Control Act as Illustrated by Senate Bill S.776 (Florham Park, New Jersey, June 26, 1975), p. 92.
22. G. Benston, "The Effectiveness and Effects of the SEC's Accounting Disclosure Requirements," Economic Policy and the Regulation of Corporate Securities, ed. Henry G. Manne (Washington, DC: American Enterprise Institute, 1969), p. 62.
23. "SEC Changes a Registration Procedure to Help Small Concerns in Raising Cash," The Wall Street Journal, March 30, 1979, p. 22.
24. "SEC Relaxes Its Restraints Significantly on Scale of Some Unregistered Securities," The Wall Street Journal, March 2, 1979, p. 101.
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27. J. Meagher, "Another Man's Poison," Barron's, September 5, 1977, p. 12.

28. J. McKeivitt, Testimony Before the Subcommittee on Administrative Practice and Procedure (October 7, 1977), p. 63.
29. "Industry Reporting Requirements--Benefit or Burden?" Federal Home Loan Bank Board Journal, March 1977, p. 9.
30. ERISA's Impact on Small Business, Subcommittee on SBA and SBIC Authority and General Small Business Problems of the Committee on Small Business of the House of Representatives (Washington, DC, October 11 and 14, 1977), p. 2.
31. *Ibid.*, p. 4.
32. *Ibid.*, p. 5.
33. See "H.R. 7739 and H.R. 10632, Small Business Impact Bill," Hearings Before Subcommittee on Special Small Business Problems, Committee on Small Business of the House of Representatives (1978); "The Regulatory Flexibility Act--S.1974," Hearing Before the Subcommittee on Administrative Practice and Procedure of the Committees on the Judiciary of the United States Senate (1977); and "S.1726, Small Business Economic Policy and Advocacy Reorganization Act of 1977," Joint Hearings Before the Subcommittee on Government Regulation and Small Business Advocacy of the Select Committee on Small Business and the Subcommittee on Economic Growth and Stabilization of the Joint Economic Committee of the United States Senate (1977).
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