DETERMINING THE COSTS OF GOVERNMENT REGULATIONS:
AN ILLUSTRATIVE STUDY

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Determining the Costs of Government Regulations: An Illustrative Study

It is undoubtedly true that government has been involving itself more substantially in regulating business activity during recent years. Costs to comply with these regulations will no doubt increase as government imposes more regulations to achieve social goals. That is not to say that governmental regulations have not been beneficial to society in one way or another. However, many people feel that there is a need for improvement in determining a balance between specific amounts of regulation and the costs associated with them. The purpose of studying effects of government regulations on business activity is to aid the decision-making process on exactly what types of regulations are necessary for business, and the effects of complying with those regulations. With the aid of business groups, concerned citizens, and political leaders, perhaps the attitudes toward governmental involvement in business activity will grow to be more of an understanding between both the public, and private enterprise.

Previous Studies

In 1978, Arthur Andersen and Company published a report of a study which was made in determining the cost of comply-
ing with government regulations. The study was made in agree-
ment with 48 companies which are members of the Business Round-
table. The 48 companies involved represent only a small por-
tion of the economy when considering the vast numbers of indus-
tries in our country. However, these 48 companies are impor-
tant in their scope in view of the fact that they are 48 of
the largest companies in operation today.¹

The study was represented by 20 different industries, and
it should be noted that this project was not made to be repre-
sentative of all businesses in general. This is because the
study represented some industries fairly well, while others
were not represented at all.²

The main purpose of the study was to measure the costs
incurred in complying with specific government regulations im-
posed on businesses by certain government agencies. More spe-
cifically, the study measures incremental costs, that is, the
additional cost involved in complying with a particular regu-
lation, as compared to the cost which would have been incurred
in the absence of that same regulation.

The study focused on six major governmental agencies and
the requirements which these agencies impose on U. S. busi-
nesses through employment of their programs. The agencies
used for purposes of this study were:

*Environmental Protection Agency (EPA)
The study was also designed to develop an effective methodology which would suitably outline the various steps involved in obtaining an accurate estimate of the incremental costs which apply to the specific regulatory agencies previously mentioned. The people involved in formulating this study hope to show that costs of government regulations can now be measured more effectively, and more accurately than ever before.3

What makes this latest study so effective is the degree to which it is so comprehensive in nature when compared to other studies. For example, during the late 1960's, a study was devised by the Office of Water Programs of the Environmental Protection Agency, one of the agencies involved in the Andersen study. The EPA's program was based on definitive expenditures, rather than incremental costs, which were made in regard to capital expenditures, operation of certain facilities, and the number of people employed to operate those facilities.4 The research data was collected by use of a survey which was sent to selected industries.5

This particular study is very limited, in that, in dealing
with costs as they apply to the EPA, the study focuses on only one problem area, water pollution. Comparing this with the Andersen study, effort is focused much deeper. It covers the effects of many agencies and the many regulations with which they impose. Up until the time in which the Andersen study was developed, most research projects for determining effects of regulation were carried out in this manner. In other words, the methodology used by Arthur Andersen and Company becomes more useful because of its uniformity and simplicity in purpose.

Purpose

The purpose of this paper is to retrace the methodology developed by Arthur Andersen and Company, and to apply it to the operations of a smaller firm. It will be an attempt to identify the agencies which impose governmental regulations on the firm, and to follow the methodology which computes the incremental costs involved with compliance of those regulations.

The focus upon the agencies involved will not only include those mentioned in the Andersen report, but will also include any agencies which can feasibly be identified for purposes of this report. This report will also examine the methodology used in depth, and will attempt to apply the costs which are relative to each agency, in relation to each step of the methodology.
Once the data has been collected, comparisons will be made between the Andersen study and the information compiled for the firm used in this report. It will be an attempt to make a comparison of which agencies affect both small and large firms, the percentages of costs for each agency in relation to the total cost of compliance, and most importantly, how those costs are allocated to various departments within the firm.

After examination of the data, a conclusion will be drawn as to whether or not it would be feasible to include smaller firms in larger studies such as the Andersen report, and to identify the real impact of governmental regulations as they apply to a smaller firm.

This report will also attempt to show the significance of using financial and accounting records to determine incremental costs of complying with specific regulations. For purposes of this report, information was obtained through the use of financial records, and also, through interviews with corporate officers.

Selection of a Company

The company used for purposes of this study is Twoson Tool and Manufacturing Company. The company was chosen on the basis of its size, location, and its willingness to cooperate. The firm was considered to be large enough to be affected
by a substantial amount of regulation, yet was deemed small enough that the monetary amounts involved would pose no problem in relation to the amount of time allowable to obtain the information from the firm. The location was also considered as a factor in terms of convenience and ease of access in relation to the field work involved for purposes of this study.

Twoson Tool Company is now in its 34th year as a family operated business. The company was originated as a wire products manufacturing company, and progressed to a manufacturer of jigs and fixtures, and special machinery up until the late 1950's. During the early 1960's, the company also included a number of special stamping dies to its processes, and with the start of the mid 1960's, Twoson Tool began manufacturing small precision components for electro-mechanical devices. These included switch components for auto manufacturers such as General Motors, and components for home appliances. The auto and appliance industries still make up the largest portion of Twoson Tool's product purchasers, as it acts as a direct supplier to these industries. In the formation of some of these electro-mechanical devices, Twoson Tool makes purchases from outside suppliers. These purchases are used to construct a total switch or device, and these in turn are supplied directly to the industry for which the device is being made. Today, Twoson Tool has also advanced to the point
of producing solid state circuitry. 

The process of manufacturing the final product is utilized by three basic departments; the engineering department, the tooling department, and finally, the switch production department. The company currently employs 65 people and operates as a non-union shop.

**Identification of the Agencies**

In obtaining the data for Twoson Tool Company, it was evidenced that few similarities exist between recognition of the agencies which have an effect on the large companies of the Andersen report, and the smaller firm. Of the six agencies which are included in the original study, only one truly makes its presence known in regard to regulation of Twoson Tool.

An identification of exactly what each agency entails and how it is involved in the Twoson Tool study will be made at this point. The Environmental Protection Agency, an agency which imposes a heavy burden on the larger companies, controls and sets standards on water and air emissions, controls use of toxic substances, sets ozone regulations, and controls development of natural resources.

Because Twoson Tool has no emissions as such, they are only involved in collecting data which reports the extent of their operations to the agency. Therefore, no large monetary costs are involved in the compliance of regulations with the agency.
The Equal Employment Opportunity Commission focuses its attention on programs which are designed to require firms to hire minorities, women and handicapped persons.

In the case of the EEO, it too has no real bearing on Twoson Tool. In this particular case, however, the reasoning is focused more on the company size, rather than the nature of its operations. During the time in which data was being collected for Twoson Tool, the company had 65 workers employed for its operations. Because the number of workers utilized is under 100, the EEO does not impose specific regulations on the company. A second determining factor is that most of Twoson Tool's contracts are for amounts under $50,000.9

The Occupational Safety and Health Administration is an agency which focuses attention on the hazards of working for a particular firm. It controls the use of toxic substances, controls noise and ventilation, checks machinery for its safety to workers, checks walking and working surfaces, and controls storage of materials.

OSHA is the one agency which effects Twoson Tool Company most heavily. At the present time, most of the company's costs involved with OSHA are replacement costs.10 This is true of the larger firms also. Most of the heavy expenditures were made during the early 1970's, while today, expenses incurred for compliance with OSHA are merely expenses to main-
tain the status quo. 11

The administration makes approximately two visits per year to the tool company. This agency not only has the largest cost impact, but it also has the largest psychological impact in terms of the attitudes of the workers. This might include positive effects in terms of safety, but also negative effects in terms of delays. 12

The Department of Energy is an agency which deals mainly with energy conservation for usage of both petroleum and natural gas. Most of the larger industries consider these costs to be relatively small in relation to the impact which they have in a secondary nature. 13

For purposes of this study, the Department of Energy can be ignored because it has a minor impact on Twoson Tool Company. 14

The Employment Retirement Income Security Act sets standards for companies to follow in regard to pension plans and retirement benefits, but does not require employers to act within these guidelines. Twoson Tool is one of these companies which does not implement a plan under the regulations of ERISA, but instead, has set its own standards. The only costs involved with relation to security acts are economic costs created by hiring professionals. 15

The Federal Trade Commission is an agency which deals in consumer protection and truth in lending acts. The Andersen
study deals with the FTC only in terms of its Bureau of Consumer Protection.

The FTC is another agency with which Twoson Tool does not deal with directly. This is because the company is a middleman and does not normally have to deal with the consequences of the final product.16 As an example, General Motors would be more likely to be subject to federal regulations for consumer protection because they are the final producers in which the middleman's devices are used, whereas our illustrative firm is a supplier.

The Methodology

In 1977, the public accounting firm of Arthur Andersen and Company was called upon to develop a complete methodology which would effectively measure the costs of government regulations on business. The methodology was then used by the Business Roundtable to collect the appropriate data associated with determining the costs of those regulations.

The study was developed with several objectives in mind, with most of the information being supplied by the methodology. What makes this particular study so significant is that it is the first time that so many of the nation's largest industries have used one single methodology in determining their regulatory costs.17
The methodology also measures incremental costs, which are the cost differences between complying with a particular regulation, and the cost that would have been incurred had the company taken actions on a matter in absence of the regulation. The methodology is what makes this particular study unique in the two ways mentioned above. Never before has such information been available to top levels of corporate management, and to political leaders.

The original study was developed in two basic phases, with formulation of the methodology involved in the first phase. The second phase of the project used the methodology in the specific collection of the cost data.18

The collection effort had to be well organized, with certain guidelines established as far as the amount of time that companies would be under review was concerned, and the proper training of personnel to carry out the collection process.

The methodology itself involved six basic steps which would be applied to the six regulatory agencies which were identified in the first phase of the project. The first step was to identify the particular action which was taken by a company to comply with a specific regulation. This involved identifying the agencies that had a particular impact on the company over a certain period of time, and then identifying the specific action. An example of this would be a company
which had to install a water pretreatment system to treat waste water before discharging it into the sewer systems to comply with a specific rule set forth by the EPA.\textsuperscript{19}

The next step of the methodology involved determining whether or not the company would have taken action in the absence of that particular regulation. Using the illustration above, the company might have determined that it would have installed a water treatment system that removed 95% of the pollutants from the water, rather than the 99% requirement set forth by the EPA's regulation.\textsuperscript{20}

The third step of the methodology involves the determination of the costs involved in complying with the regulation. This particular step is important in that it makes use of the financial or accounting records of the company, and any other useful records which might apply in determination of the specific costs. Once again, using the previously mentioned illustrative company, it might have been determined that the cost of installing the aforementioned pretreatment system to be \$1,200,000 with reference being made to the fixed asset ledger.\textsuperscript{21}

Next, the company determines the costs which would have been incurred had the company not been required to comply with a specific regulation. This would also involve determining whether or not the company would have taken any actions on a particular matter had it not been for a specific regula-
tion. An instance where a company acts in absence of a regulation might be a case where pressure is exerted on the company by certain interest groups. These instances are merely judgments by the company's cost project team leader. Referring to our example, the company in question might have determined that the estimated cost of installing a water pretreatment system which removes only 95% of all pollutants, as determined earlier, would be only $800,000. This could possibly be based on the costs involved in installing such a similar system at other plants which the company owns. 22

The fifth step of the methodology involves determining the incremental costs of complying with the particular regulation involved. Once again, an incremental cost is the difference between the cost involved with compliance, and the cost involved had the company not been required to comply. 23 Referring to our example again, the company would have made a simple subtraction of the $800,000 cost involved without the regulation, from the $1,200,000 cost of compliance. In this instance, the incremental cost is determined to be $400,000.

The final step of the methodology is to review, verify, and submit the previously collected data. This final step is also important in that those collecting the data must be sure that proper controls have been applied in the collection process, so that the information will be understandable and
authentic to members of the public. 24

Illustration of the Methodology

To further illustrate the use of the methodology and how it works, an attempt will be made to show the costs involved as they apply to a local Muncie firm. As previously mentioned, the company under review is the Twoson Tool and Manufacturing Company.

First of all, it should be noted that the amounts of money involved will undoubtedly be small because government regulation is very limited as it applies to this company. As was mentioned earlier, only one of the six agencies involved in the Andersen study would probably be extensive enough to supply cost data information for purposes of this study.

Upon review of the information supplied by Twoson Tool Company, in light of the procedures outlined by the methodology, only three of the agencies were found to be applicable to the company in one way or another. The EPA, ERISA, and FTC did not apply to the company at all. The EEO, DOE, and OSHA were the three agencies which did apply, however, only the Occupational Safety and Health Administration involved any costs during the period under review, which was 1978.

First of all, the OSHA inspector makes at least an annual visit to the company, and sometimes two. He writes a citation
for any infractions, and estimates are taken for corrective action. In dealing with OSHA, the company does not comply to one specific rule, as much as general compliance with Occupational Health and Safety for all areas of the plant.

For 1978, Twoson Tool took specific actions for guarding machinery, safety glasses, ear protection, floor markings, and exit sign maintenance. The actions were taken in regard to violations of safety laws brought forth by OSHA, and general upkeep of the status quo. This is where company records become useful in determining which information is necessary for the methodology. Not only do accounting records show financial aspects of the cost collection, but records of safety information show the specific violations involved, and any penalties imposed for those violations.

For example, on August 28 of 1978, a safety inspection of Twoson Tool was carried out. On September 11, information regarding the violations and the subsequent issuance of penalties was sent to the company by the Indiana Division of Labor.25

Notification of the penalties sent to the company are deemed to be the final order of the Board of Safety Review, and are not subject to review by any court unless a letter of contest is sent out within 15 days from the date of receipt of notification. If the contest is not filed within the 15 day limit, the penalty becomes immediately payable.26
In the case of Twoson Tool, a Safety Order was issued to the company notifying them that they were in violation of Public Law IC22-8-1.1. The law was violated in two respects.

Section 29CFR1910.219(d)1 stated the following:

Failure to guard pulleys, any parts of which are 7' or less from the floor or work platform; in that the inside portions of 2 V-belt pulleys on the U. S. Baird Stamping Machine #33 in the Multi-Slide Dept. are 12½" and 29½" to the center of the pulleys from the floor and are not guarded.27

Another section of the Public Law which was violated, Section 29CFR1910.219(e)(3)(i), regarded similar matters:

Failure to enclose vertical and inclined belts with a guard; in that the 4 inclined V-belts on the U. S. Baird stamping Machine #33 in the Multi-Slide Dept. are 8½" to 41" above the floor and are not completely enclosed with a guard.28

The above information is required to be posted for a period of 3 working days, or until the violation is corrected, whichever is shorter.29

Upon identification of the specific law being violated, and what actions must be taken, the company must determine the cost of the actions taken to correct the matter. In this particular case, the action taken was to install the appropriate guards to protect workers involved with the aforementioned machine.

Determining the cost of installing the proper guards
not only would involve the cost of labor and parts, but would also include the cost of any penalties imposed for the infrac-

tion.

In this particular case, there was no penalty involved for the violation, but for illustrative purposes, an attempt will be made to show how safety records, rather than just accounting records, can also be used to determine compliance costs.

When notification of the violations by Twoson Tool were made through use of a Safety Order, another form, indicating the amount or absence of the penalty was also enclosed. The form includes two sections which list all of the violations considered to be serious or nonserious in nature. A serious violation is one which exists in a place of employment where there is "substantial probability that death or serious physical harm could result because of a certain condition." A nonserious violation is not considered to be "serious within the meaning of the Law, but has a direct relationship to occupational safety and health."  

An illustration of how companies are notified of penalties as taken from the records of Twoson Tool Company is shown as follows:

6. **NONSERIOUS** Violations

<table>
<thead>
<tr>
<th>Safety Order No.</th>
<th>Item No.</th>
<th>Proposed Penalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>NO PENALTY</td>
</tr>
</tbody>
</table>

(continued on following page)
7.) Total proposed penalty for all alleged violations. $\textit{NONE}$

(Figure 1 - Notification of Penalties)$^{32}$

In the case of Twoson Tool Company, the violations of Public Law IC22-8-1.1 were considered as nonserious. Reference is made to the number of the Safety Order which was also issued to the company, and in the final column, the dollar amount or the fact that there is no penalty is also shown. Space is provided for each violation and amount, and the total dollar amount is shown at the bottom of the section. In this case, only one violation was cited, and no dollar amounts were incurred. Had the violations been willful or repeated, there is a strong likelihood that a penalty would have been involved.$^{33}$ In the case where a penalty is being contested, there is also the consideration of additional court costs.

If there is a monetary penalty involved, Public Law IC22-8-1.1 states:

Civil penalties owed under this law shall be paid into the Treasury of the State of Indiana and shall accrue to the State of Indiana and may be recovered in a civil action in the name of the State of Indiana in the Circuit Court where the violation is alleged to have occurred or where the employer has its principal office.$^{34}$

The next step in determining the cost of complying with a particular regulation would be to check the accounting records for the amounts involved in replacing the neces-
sary guards, and to comply with the other areas of OSHA regulations.

In 1978, it was found that the cost involved in complying with all government regulations was a mere $500. All of the $500 were applicable to OSHA regulations, while there were no expenses incurred for the year to comply with the other two agencies applicable to the firm. In addition to the installation of pulley guards, the remainder of the $500 expensed in 1978 were replacement costs for the upkeep of previous measures imposed by OSHA. As was mentioned earlier, most of the costs involved with OSHA for firms in the Andersen study were found to be replacement costs. The largest costs were incurred during the 1970's when OSHA fully initiated its programs. In Twoson Tool's first year of dealing with OSHA, accounting records showed that compliance costs were slightly in excess of $5000. For purposes of this project, the $500 will be considered to be the incremental costs involved, although there was no actual determination by management as to whether specific actions would have been taken in the absence of regulation.

Review of Both Studies

In reviewing the results of both the Andersen study, and the Twoson Tool project, it is difficult to draw specific linkages between the costs of complying with regulations for
small and large firms.

First of all, 100% of Twoson Tool's costs of compliance were involved with OSHA for the period under review. In comparing this fact to the Andersen study, there is no similarity at all between the great impact which OSHA has on the small firm in relation to the impact which OSHA has on large firms. The greatest impact in complying with regulations for the 48 large firms were for compliance with the EPA. Approximately 77% of the costs involved were for compliance with the EPA, whereas, only a mere 7% were involved with OSHA. The other total costs involved with the Andersen study were as follows:

<table>
<thead>
<tr>
<th>$MILLIONS</th>
<th>EPA</th>
<th>EEO</th>
<th>OSHA</th>
<th>DOE</th>
<th>ERISA</th>
<th>FTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>217</td>
<td></td>
<td>184</td>
<td>116</td>
<td>61</td>
<td>26</td>
</tr>
</tbody>
</table>

(Figure 2 - Separation of Costs by Agency)

The next problem involved with analyzing the data collected is to allocate the various costs as they apply to the different departments. In the case of Arthur Andersen's study, the
Total costs were classified in four major areas. Costs were applied to Research and Development, Product, Operating and Administrative Expenses, and Capital classifications.

The total costs allocated for the Business Roundtable firms were listed as follows:

<table>
<thead>
<tr>
<th>Classification</th>
<th>$Millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research and Development</td>
<td>96</td>
</tr>
<tr>
<td>Capital</td>
<td>870</td>
</tr>
<tr>
<td>Product</td>
<td>567</td>
</tr>
<tr>
<td>Oper. and Administrative Expenses</td>
<td>1089</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2.6 bil.</strong></td>
</tr>
</tbody>
</table>

(Figure 3 - Allocation of Costs for Each Agency)

This can be compared to the allocations of costs for OSHA in the same 48 companies. (See Figure 4 - page 22) The difference is that in complying with OSHA, most of the costs involved were for Operating and Administrative Expenses.

This is where the only slight similarities between the Andersen study and the Twoson Tool project exist. Twoson Tool allocates all of its OSHA costs to Operating and Administrative Expenses. This in turn is ultimately reflected in its product pricing. The company does not find it advantageous
to allocate these costs by department or product because of their continued variance.39

<table>
<thead>
<tr>
<th></th>
<th>$MILLIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oper. and Administrative</td>
<td>103</td>
</tr>
<tr>
<td>Product</td>
<td>2</td>
</tr>
<tr>
<td>Capital</td>
<td>68</td>
</tr>
<tr>
<td>Research and Development</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>$184</td>
</tr>
</tbody>
</table>

(Figure 4 - Allocation of Costs for OSHA)40

As mentioned earlier, the other similarity involved is the fact that both the Roundtable firms and Twoson Tool have very low costs for compliance of OSHA regulations because most of the heaviest expenditures took place in the early 1970's.

As one can see, the differences in effects of governmental regulations between small and large firms is astounding. It almost seems as if government has no interest in regulating small business. This could perhaps be an incentive for growth with later and more substantial impositions of government regulations to be made when a company becomes more diverse and extends its operations to where more government agencies would be involved with the firm.
On the other hand, it could also be said that government regulates large firms more extensively in an effort to act as a watchdog, and to allow smaller firms to grow toward achieving more pure competition in American business.

It would seem that small business has been more subject to be involved in costs which are opportunity costs, that is, costs which are really incurred only in an indirect manner. These might include delays caused by regulations such as inspections. For example, an OSHA inspection of a factory's overhead crane might cause a production delay for workers in another area of the plant who depend upon use of the crane.

Opportunity costs have been under much public scrutiny as they apply to small business, however, the disadvantages are difficult to measure. Some people feel that government regulation does more harm than good. According to Armand J. Thieblot, Jr., a Professor at the University of Maryland, businesses are becoming more and more resentful of governmental interference. The costs to small business involve more than just time and money, but also involve frustration, aggravation, and loss of independence.41

What Dr. Thieblot feels is one of the most depressing aspects of regulation of small business, is that most of it is unintended and unnecessary. "Many small firms are not convinced that the regulations are meaningful. Much of the trivia
associated with OSHA seems to have no noticeable relationship to safety." This was also found to be the opinion of Michael J. Etchison, President of Twoson Tool Company.

Compliance with petty regulations of OSHA are required by both small and large firms, however, the costs associated with the actions to correct safety deficiencies may be the difference between making and breaking a firm, especially if it is small.

It should be noted that opportunity costs were ignored when determining costs in the Andersen study, as they were not considered in the Twoson Tool Company project. However, when speaking of small business and the concept of regulatory costs, the idea of opportunity costs as being the real cost factors is something to be considered.

Whatever the case, this paper has attempted to show how a standardized methodology can be used to determine costs of government regulations, whether the firm is large or small, and to show how the financial records of a company can be a great asset in attempting to draw conclusions about costs incurred. Hopefully, the studies of the future can be advanced for greater understanding and reform of the regulatory structure.
ENDNOTES


2Andersen, p. 1.

3Andersen, p. 1.


5Lund, p. 4.

6Interview with Michael Etchison, President of Twoson Tool Company, muncie, Indiana, April 17, 1979.

7Etchison, April 17, 1979.

8Etchison, April 17, 1979.

9Etchison, April 17, 1979.

10Etchison, April 17, 1979.

11Andersen, p. 31.

12Etchison, April 17, 1979.

13Andersen, p. 36.

14Etchison, April 17, 1979.

15Etchison, April 17, 1979.

16Etchison, April 17, 1979.

17Andersen, p. 2-1.

18Andersen, p. 2-4.


20Andersen, Executive Summary, p. 10.

21Andersen, Executive Summary, p. 10.
ENDNOTES (continued)

22 Andersen, Executive Summary, p. 10.
23 Andersen, Executive Summary, p. 10.
24 Andersen, Report, p. 3-1.
25 Indiana Department of Labor, Department of IOSHA, Safety Order No. 1, D.O.L. 2.
26 Indiana Department of Labor, Department of IOSHA, Notification of Proposed Penalty, D.O.L. 3.
27 Indiana Department of Labor, D.O.L. 2.
28 Indiana Department of Labor, D.O.L. 2.
29 Indiana Department of Labor, D.O.L. 3.
30 Indiana Department of Labor, D.O.L. 2.
31 Indiana Department of Labor, D.O.L. 2.
32 Indiana Department of Labor, D.O.L. 3.
33 Indiana Department of Labor, D.O.L. 2D.
34 Indiana Department of Labor, D.O.L. 3.
35 Andersen, Executive Summary, p. 19.
36 Andersen, Executive Summary, p. 19.
37 Andersen, Executive Summary, p. 15.
38 Andersen, Executive Summary, p. 15.
39 Information in a letter to the author from Michael Etchison, President of Twoson Tool Company, May 9, 1979.
40 Andersen, Executive Summary, p. 31.
ENDNOTES (continued)

43 Etchison, April 17, 1979.
44 Thieblot, Nation's Business, p. 72.
BIBLIOGRAPHY


Information in a letter to the author from Michael Etchison, President of Twoson Tool Company, May 9, 1979.

Interview with Michael Etchison, President of Twoson Tool Company, April 17, 1979.

