# **University Grant Program** Research Report

A STUDY OF MANUFACTURING FIRMS IN CANADA (With Special Emphasis on Small and Medium Sized Firms)

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Faculty of Management Studies, University of Toronto. December, 1973

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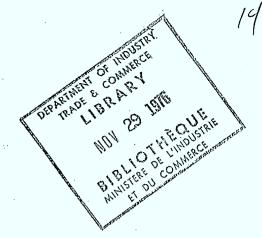


Industry, Trade and Commerce

and Technology Ottawa, Canada

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The views and opinions expressed in this report are those of the authors and are not necessarily endorsed by the Department of Industry, Trade and Commerce.

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#### INTRODUCTION

Everybody talks a lot about the problems of small businesses but nobody does much about them."

We could paraphrase the well-known statement about the weather attributed to Mark Twain in the above way. When the statement is related to the weather, it still brings a wry smile to people as we know the difficulty in managing weather. When the statement stands as we have it, the reaction is a political blast or a passionate statement of the importance of the little businessman and how neglected he is. Yet the problem of helping small business is pretty similar to that of doing something about the weather: we really don't know enough of the problems and how to be of help.

This is one of the main reasons for the survey. It is a broad attempt to get at the facts and possibly to obtain some prescriptions. It is one small attempt to provide some yeast in a billowy world of politics and passions. At that, it can only represent a small start and, though it may point a prescriptive finger, it will probably point toward bigger and better research which will lead to more meaningful action.

It is rather remarkable that an early check of libraries of schools of business and commerce across Canada and of many other organizations with libraries revealed a paucity of factual information on the subject of small businesses in Canada. Many places replied that they had little information or none at all. Most of the references went to speeches or articles on the subject. The gist of all these

has already been mentioned: the importance of smaller businesses and the need to do something to help them. And tied in with this theme were pet suggestions, but very little factual information or background factual analysis of the problems and the effect of changes.

To study the problem we decided it would be best to do an overall study of manufacturing businesses in Canada. It should be remembered that this study is restricted to manufacturing companies and includes no service industries which are a vital and growing part of the business scene in Canada.

If we had studied small business only, we would have a problem in defining what we meant by small businesses; we would have no means of making comparisons with larger companies. We, therefore, made an across-the-board study and then broke out different sizes of firms to obtain contrasts and to discover where we had significant ones. It will also be noted that our main problem in obtaining information was from the smaller companies. This is understandable. So our small sample does not reflect the true status of manufacturing firms as they exist in Canada. Also, the total number which we were able to analyze is, admittedly, small. To obtain a larger sample would require more personal interviews and more money. Nevertheless, we feel that we have made some contribution to understanding small business and that our modest efforts will be of help.

Some research carried out in the United States and the United Kingdom were of great help.

This study was carried out under a grant from the Federal Department of Industry, Trade and Commerce.

#### RECOMMENDATIONS

- 1) Our research has uncovered what may be the salient problems facing Canadian manufacturing executives—managing human and capital resources. Many firms, however, are unaware of the programmes now available. A better attempt should be made in disseminating information on what aids are available, both on a federal and provincial basis. Some 40% of respondents are not aware of either financial or technical assistance. A co-operative dissemination effort with the business and trade press would be useful.
- 2) Our research has uncovered most significant differences in the management of Canadian and foreign owned American firms. It is the Canadian owned firm that is operating at a disadvantage on most dimensions. It is also the smaller and medium sized firm which is feeling the brunt of this relative disparity. What is required is a strategy to help the generally smaller Canadian firm stay and remain competitive with regard to the foreign owned branch plant. Several specific recommendations can be made here:

# A - Federal and Provincial Subsidization--

Additional subsidization may be necessary, especially for the small firm. This subsidization might be directed at both the source or delivery system (actual programmes offered by associations and secondary education institutions) and participants (both companies and individuals). Perhaps an accelerated write-off or grant system would help the individual and small business man suffering from a restricted cash flow--sort of a Small Business Problem Review Board with a financial capacity.

#### B - Consulting Service --

We note that small firms have a need to develop better informed and more sophisticated managers in the use of management principles and techniques. One way of providing necessary skills to smaller manufacturers would be a decentralized consulting service organized through the business faculties in Canadian universities. Such a service should perhaps operate on a provincial level with a direct Grant-in-Aid to each student-staffed service organization. It would be less bureaucratized than a direct government service and would more openly gain acceptance from participating companies.

- 3) Increased government bureaucratization is <u>not</u> called for. In fact, a small business department should not be created. The 52% of our sample who voted "No" on this proposal indicates that there is lack of support for such a department.
- Locating capital resources is a frequently voiced problem of Canadian manufacturing firms. Several government programmes (IDB and PIAT) could be made more useful and responsive to local needs by decentralization. The SBA in the United States is frequently mentioned in interviews as a model. Again, what is needed is more local discretion on the part of regional IDB officials and less centralization in Ottawa.
- The role of new technological innovators, namely, computerization, needs special attention for Canadian manufacturing firms. We note here large and significant differences between Canadian and U.S. owned firms. More study is needed on the resistance of firms to technological innovation and the problems encountered in introducing technological innovation.

- 6) A study of service industries should be conducted with special effort to see how these help manufacturing industries in Canada in the short and long run. For example, a study of financial industries and their help in technological developments would be very useful.
- A study should be undertaken to relate more thoroughly the relationship of management training and company success. This would involve the level of management training (both institutional or other) of new employees, as well as use of continuing education for managers on some sort of planned system.
- 8) Finally, the most striking discovery in our research has been the disparities between Canadian and U.S. owned firms. A more controlled study, industry by industry, as well as by different forms of ownership, is called for. We believe that this will enable us to develop a strategy for making the Canadian firm more competitive and profitable.

# OBJECTIVES

In the spring of 1972 we embarked upon a survey of Canadian manufacturing firms with the following objectives in mind:

> The objective of this study is to survey small businesses in order to obtain a better understanding of the value of their contribution to the economic life of Canada and some guidance on how they might contribute more fully to our economic growth. We shall look at the interests and problems of the managers, often owners, of small companies in manufacturing to obtain information about their problems in regard to money, technology, training, government assistance, and also to see what contribution they make directly or indirectly to the creation of jobs in this country and to innovative developments in industry.

The following dimensions were specifically outlined as areas

for analysis:

Structure:

ownership, legal structure, ratio of managers to employees, spans of control, number of supervisory levels, etc.

Innovation:

rate of innovation, sources of innovation, what stimulated innovation, where did innovations originate?

Competition: sources of competition, intensity of competition, main competitive advantage, major customers and markets.

Education

and Training: degree of education, training and development policies, sources of information, tuition policies.

Unionization ·

Labour

Relations: percent unionization, type of unions, strike

incidents.

Financing:

sources and problems, nature of financial information system, provincial and federal

programmes.

Taxes: form of tax assistance desired. Technology:

nature of technological processes, production sequencing, technical sophistication, degree

of automation, use of computers.

Objectives:

What are the companies' priorities and goals?

Problems:

What are the problems facing small business?

Climate:

What do executives regard as the operating and decision-making climate of the firm? -- the degree of rootiness, certainty, stability, com-

plexity and predictability?

Formalization:

the companies' reliance and use of written documents, written performance criteria, written policies and job descriptions.

# PRÒCEDURE

# A. Library Research

Business and academic journals were reviewed in relation to the above areas of investigation, specifically with respect to small business firms. This survey of the literature provided some overview of the small business firm in Canada and was helpful in the construction of research questionnaires. Impressionistic accounts, rather than empirical studies, characterize the referenced material. These references describe the advantages and problems faced by small businesses as well as their vital role in the Canadian economy. A useful bibliography on small business is provided in Appendix I.

### B. The Interview Phase

A preliminary questionnaire (Appendix IIa) was constructed and was ready to be tested in this pilot phase of the study. A listing of the manufacturing population in the Toronto area was obtained. Three hundred and sixty-eight firms (our expectations were a 33% percent response rate and this would yield approximately 125 interviews) were randomly selected from the Toronto area population. Two Ph.D. students and one M.B.A. student were hired as interviewers. Telephone calls were carried out by each interviewer using a standardized protocol (See Appendix IIb). A total of 86 interviews were completed. This represents a response rate of approximately 25%.

#### C. The Mailed Survey

After examining the results and problems encountered in the interview study, a final version of the questionnaire was developed (See Appendix III). The English questionnaire was translated by a

doctoral student of the University of Toronto, French Department, for mailing to French-speaking firms. Canadian Mailing Services, a subsidiary of Southam Publications, was contracted to provide a random sampling of Canadian manufacturing firms with addressed labels to the chief executive of these firms. A total of 2,500 questionnaires were mailed to firms across Canada. An additional mailing was sent to 500 French-speaking firms.

### D. The Sample:

Interviews: 368 Calls Placed 86 interviews
Questionnaires: 2500 English 262
500 French 29

..377

Given the paucity of French questionnaire responses and their low response rate, it was decided to remove this sub-sample from the data analysis.

Sample representativeness can be examined in the following set of figures. A 1967 Report (Commerce 1967) lists the number of employees per firm in the Canadian Manufacturing Industry. These figures can be seen in the left hand column. The distribution of our sampled firms appears in the right hand column. We can see that the very small firm is under-represented in our sample and presents a rather comprehensive response problem, lack of time and sophistication and perhaps other reasons are frequently offered by the very small businessman for not responding in surveys of this kind.

Population (Com. 1967)		Hecht-Siegel Sample	
	Percent	•	Percent
less than 5	41	, .	03
5 - 99	53	,	28
100 - 499	06		61
500 - 1500	00.8		05
over 1500	00.2		02

#### RESULTS

a) Characteristics of the sample

#### Structure

The average firm had 266 employees and 15 identified managers. 67% of the sample consisted of Canadian owned firms. The average age of the firms was 38 years and it had 3.3 levels of management. The model respondent was the chief executive of the firm who had an average age of 43 and had six subordinates reporting to him. Six firms were proprietorships, six were partnerships, 226 limited private companies and 41 were limited public companies. Forty-eight firms are listed on various stock exchanges.

Sixty-eight of the respondents were founders of the company and another sixty were members of the founder's family.

#### Innovation

In a relative sense, respondents reported less success in introducing a relatively major innovation in the Research and Training areas in comparison with Product Line, Marketing Techniques, and Manufacturing Facilities.

Academic sources (3%) and consultants (6%) represent a little used source of innovation in comparison to competition (24%) and consumer demand (41%).

# Competition

Intensity of competition can be seen in responses to the question (see table), "How intensive are the following areas of competition in your industry?" We can see that in a relative sense, price is the

most, and flexibility the least intensive areas of the firm. It is also apparent that there is li the differentiation in the rating scales; greater differentiation can be seen in responses to the next question, "Which represents your main competitive advantage?"

# Main Competitive Advantage

Price	12.8%
Product design & Quality	45.17%
Prompt Delivery	7.0%
Flexibility	10.7%
Service	19.8%

The average firm has 3.2 serious competitors and its percentage of sales to its largest customer is 21%. Percentage of sales to the largest customer is related to the size of the firm. Small firms report that 24% and large firms 18% of their sales go to their largest customer.

How intensive are the following areas of competition in your industry?

industry?			<u>;</u>		
Price				X	·
Product Design & Quality			X		
Prompt Delivery			X	/	•
Flexibility to meet Customer			<b>X</b>		
Specifications Service	* * * * * * * * * * * * * * * * * * * *		<b>X</b>		
	1 2 not intensive	3 4	5	6	7 intensive

# Education and Training

Education and Training appears as a major problem area for manufacturing firms. Few firms report having separate training programs for supervisors (32%) and managers (37%). Size and ownership greatly affect these results and we shall present them in greater detail in a later section.

Sources of education or information can be seen in the results presented in the following table:

Sources of Education and Information -How Frequently are they used?

Academic Programs	X		
Major Corporations		X	
Professional Associa- tions Trade Publications		X	
Business Periodicals		X	
Consulting Services	<b>X</b> .		
Government Agency Programs	X		
Government Agency Publications	X		
1 infreque	2 3 ently used	4	5 6 7 used often

#### Unions

56% of the firms are represented by International Unions, 8.5% by National, 2.7% by Regional, and 4.9% by Company Unions. On average, a total of 74% of the firms' employees are unionized.

# Financial, Taxes, Federal & Provincial Programs

The average level of sales reported was \$700,000. Forty-four percent of the firms attempted to obtain additional financing in the last few years. 59% of the firms felt they could apply for Federal Financial Aid and 51% felt they could apply for Federal Technical Aid. 53% felt they could apply for Provincial Government Aid Programs. Only 45% indicated having applied to such programs.

The following responses were tabulated in reference to tax assistance preferred.

	one ngreement
open capital depreciation allowance	62%
tax incentives to exporters	44
tax allowance to firms competing with imports	39
reduction in corporate taxes	_81
corporate tax structure based on a stepladder system	_23

# Nature of Technological Processes

The general picture of Technology can be seen from the responses to the following questions:

How broad or narrow is the range of products produced by your organization? (Circle the number which is most representative.)

Extremely Narrow 1 2 3  $4^{(4.6)}$  5 6 7 Broad

How much are activities sequenced in your company's work flow?

 Very little
 (5.1)
 A great

 sequencing 1
 2
 3
 4
 5
 6
 7
 deal

How (technically) sophisticated is the manufacturing equipment in your company?

To what degree is your production automated? (Circle appropriate number.)

1 2 (2.8) 3 4 5

Manual Little Semi- Mostly Fully
Automation Automation Automated Automated

What is the extent of your firm's reliance on computers?

l 2<sup>(X)</sup> 3 4 5 none slight moderate considerable extensive

We note but a slight reliance on computers, in general little on semi-automation and a moderate degree of technical sophistication.

# Goals and Objectives

Each executive was asked to select and rank three of a list of objectives in terms of their importance.

	% Ranked 1st priority	% Ranked 2nd priority	% Ranked 3rd priority
Community welfare	1.2%	1.2%	1.5%
Organization stability	6.3%	7.9%	10.4%
Industrial leadership	4.8%	5.5%	10.7%
Employee welfare	1.2%	12.8%	23.5%
High productivity	8.1%	21.6%	10.4%
Profit Maximization	62.4%	12.8%	9.8%
Organizational growth	9.6%	22.2%	11.0%
Organizational efficiency	6.3%	15.8%	22.3%

# Problems

We attempted to measure the problems faced by the responding firms by two methods. The first method requested each executive to rate the degree of problem severity to the following list on a 1 (not a problem) to 7 (a serious problem) scale:

Failure to adapt to change	2.0
Shortage of capital	2.0
Managerial incompetence	2.1
Lack of planning	2.2
Lack of budgeting and control	1.7
Poor marketing and sales	1,.9
Lack of imbalance of skills and experience	2.4

In a relative sense, "lack of skills and experience" was seen as the greatest problem.

Another way of examining the saliency of problems mentioned by upper level executives of the firm, was to ask each respondent to reply to an open-ended question: "What was the most significant problem encountered?" The use of the open-ended questionnaire permits us to analyze responses in terms of their saliency to the executive of the firm. These comments or responses were then analyzed and the following trend emerged:

# Problems Mentioned in Order of Frequency

Personnel - Manpower	40%
Capital shortage - Financial resources	19%
Growth .	8%
Developing Narkets	6%
Rising Labour Costs	6%
Productivity	5%
Government Interference	5%
Others Mentioned.	

Internal Organization

Raw Materials

R & D Monies

Imports

Survival

# Verbatim Examples of Problems Mentioned

# Personnel - Manpower

"Inadequate competent staff trained in sound principles of management"

- a company employing 471

"Quality personnel a continuous problem"

- a company employing 1800

"Quality and supply of supervision"

- a company employing 6000

"Finding sufficient, willing and adequately trained employees"

- a company employing 210

"Hiring skilled help, good people with technical skills are not around"

- a company employing 22

# Financial

"Shortage of capital

- a company employing 240

"Financial tightness"

- a company employing 950

"Lack of good financial management"

- a company employing 120

"Shortage of working capital"

- a company employing 175

While personnel - manpower problems seem to occur in many firms, regardless of size, financial problems seem to be more common in smaller sized firms (i.e. employing less than 200 employees). We will return to these salient problems in our recommendations.

Do firms want the Federal Government to develop a small business bureau whose sole function would be to provide financial and technical assistance? - only 52% of the respondents answered in the affirmative. This percentage figure was not affected by the actual size of the firm.

# Planning and Formalization

On the average, executives reported that 66% of their time was spend on short range planning. This percentage did vary significantly with size of firm. The larger the firm, the greater time spent on long range planning.

Reliance on Rules, Regulations and written documents can be seen in the responses to the following items - size definitely affects the degree of formalization - larger sized firms are more formal. But another way of looking at these data would indicate that the reliance on written documents, especially in the areas of performance appraisal is quite low.

Duties, authority and accountability are documented in policies procedures or job descriptions.

Performance appraisals are based on written performance standards or criteria.

Standards of performance and control systems have been established in writing.

Written documents (such as budgets, schedules, project specifications, procedures or program plans, job descriptions, etc.) are used as an integral part of job.

False

True

#### CORRELATES OF SIZE

One method of examining the "effects" of size on manufacturing firms is to examine the correlation of number of employees with other variables and dimensions under investigation. This method will allow us to see whether innovation, training, profitability, formalization, decision climate, etc. have any relationship to a firm's size. One problem in using correlations and testing their statistical significance concerns the nature of the distribution of your variables. In this case, size (i.e. number of employees) of the firm itself. Our earlier data indicated that our sample of firms had a highly skewed and kurtotic distribution (as opposed to a normal distribution) on employee size. For this reason we have also taken the log transform of employee size. This serves to normalize the distribution of this variable and makes the interpretation of its correlation with other variables more meaningful.

As one would expect, the structure of a firm is highly correlated with its size. There is no need to dwell on these figures. The rate of innovation and origin of innovations appear to have significant correlations with the size of a firm. Larger sized firms appear more able to respond to consumer demand and competition. They also have slightly less competitors while supplying a much larger national and international market.

In the area of training & development and the uses of information, we again note that larger firms are doing more for their managerial personnel and are utilizing many more sources of information and education than smaller sized firms. Larger firms rate their profitability higher and report much greater success in attaining financial aid when they do pursue it.

Chief executives from larger firms desire and prefer much greater tax assistance than those representing the smaller firm.

Failure to adapt to change, managerial incompetence, lack of planning and lack of budgeting and control are regarded as more serious problems in larger sized firms. In addition, the larger sized firm reports less flexibility and ability to specialize to meet customer specification. It, the larger firm, however, reports that employees have greater freedom and discretion than the smaller firm.

Less time is spent in the larger firm in brush fighting and more use is made of written procedure guidelines in a professional approach to managing work, size does affect the use of technology, especially the use of sophisticated computer technology.

Of special interest are the variables that do not relate to size of organization. The goals of top management for example are quite unrelated to organizational size. In addition, the use of Federal or Provincial programs for Financial and Technical aid and the knowledge of their existence are also unrelated to the size of organization.

# Correlates of Size (Number of Employees) and Log Transform Size

	•	
Dimension	Size (Number of Employees)	Log Transform of Size
Structure:		
Number of Managers	.62xxx	.44xxx
Age of Firm	.30xxx	.33xxx
Number of Management Levels	.48xxx	.72xxx
Number of Subordinates Reporting to Chief Executive	.25xxx	<b>12</b> x
Number of Subordinates to First Line Foreman	.06	17x
Innovation		
Product Line	.07	.14x
Marketing	.11	.1.5xx
Manufacturing Facilities	.07	.18xx
Research	.10	.09
Skill of Employees	.16	. 26ххх
Origin of Innovation		
Consultants	.05	.12x
Competition	01	.18xx
Consumer Demand	.07	.25xxx
Number of Competitors	06	12x

Dimension (	Size (Number of Employees)	Log Transform of Size
Market Supplied:		· · · · · · · · · · · · · · · · · · ·
National :	.03	.12x
International	.08	19xxx
Training Programs for:	· · · · · · · · · · · · · · · · · · ·	
Supervisors	.14x	.31xxx
Managers	.21xxx	,32xxx
Frequency of Use:		
Academic Programs (Courses)	.09	.18xx
Major Corporations Supplying Technical Information	.24xxx	.36xxx
Professional Asso- ciations	.11	.19xx
Trade Publications	09	07
Business Periodicals	.07	.31xxx
Consulting Services	.18	.19xx
Government Agency Programs (Courses)	.16	.17x
Government Agency Publications	.12	.29xxx
Subsidize Tuition	.11	.50xxx
Profitability	.13x	.15x
Success in Obtaining Financial Aid	.08	. 24xx
Tax Assistance Preferred:		
Depreciation Allowance	.10	.35xxx
Tax Incentive to Export	ters .01	.23xxx

<u>Dimension</u> (Number	Size Log Tran of Employees)	sform of Size
Tax Assistance Preferred		
Cont'd.		,
cont a.	· · · · · · · · · · · · · · · · · · ·	•
Tax Allowance to Firms	.07	22xxx
Competing with Imports		•
Reduce Corporate Taxes	.09	.37xxx
V .		
Problems:		,
•		
Failure to Adapt to	.00	.22xxx
Change		
	0.1	
Shortage of Capital	- 01	03
Managarial Tracementance	.02	29xxx
Managerial Incompetence .	.02	LJAAA
Lack of Planning	.01	24xxx
Back Or I Laming		
Lack of Budgeting	- 01	18xxx
and Control		,
		A second to
Strengths:		
Flexibility	- 06	25xxx
Specialization	- 03	16xxx
Employee Freedom and	08	30xxx
Discretion		
Percent Time Spent on	- 20xx	22xx
Short-Range Planning	- 2011	LAAA ,
bhort lange ranning		
Formalization		•
	· · · · · · · · · · · · · · · · · · ·	
Reliance ca Policies and	.11	.30xxx
Procedures		
		•
Duties, Authority and		
Accountability are	.16x	. 24x
Documented in Policies, Procedures or Job	OLUA /	• <del>- 1</del>
Descriptions		
	• •	

Dimension	Size	Log Transform of Size
(Number	of Employees)	
Reliance on Policies and Procedures, Cont'd.		
Performance Appraisals are Based on Written Performance Standards or Criteria	.15x	.22xxx
Standards of Performance and Control Systems have been Established in Writing	.12x	.23x
Written Documents (Such as Budgets, Schedules, Project Specifications, Procedures or Program Plans, Job Descriptions,	.12x	25xxx
etc.) are used as an Ingegral Part of Job		

Note: x indicates significant correlation at .05 level

xx indicates significant correlation at .01 level

xxx indicates significant correlation at .001 level

# Comparison by Size and by Canadian vs. American Ownership

In this study 86 interviews and over 300 questionnaires were gathered. For purposes of this report companies owned by other than Canadian or United States control were dropped from the analysis. A total of 309 firms remained for analysis. They are distributed as follows:

	Canadian Owned	American Owned	Totals
Under 125 employees	118	25	143
125 - 200 employees	62	30	92
Over 200 employee's	46 %	28	74
	· · · · · · · · · · · · · · · · · · ·		309

# **Analysis**

The supporting tables presented here are the results of a Datatest ANNOVA Program and use the analysis of variance F Statistic. The tables present means and sample size for each cell. F ratios and their significance will follow each table. The level of significance for any F ratio will be expressed as follows:

NS = Not Significant

\* = Significant at .05 level

\*\* = Significant at .01 level

\*\*\* = Significant at less than .001 level

 $F_1$  = Refers to the test for significance of size of firm

F<sub>2</sub> = Refers to the test for significance comparing Canadian and U.S. owned firms

 $F_{3}$  = Refers to test for interactions

For purposes of this report the reader should examine the  $F_2$  statistic.

#### Planning

Conceptually, planning is the starting point in the cycle of managerial activities. The quality and nature of the planning process dictates, to a considerable extent, the methods of organization and control processes used in administration. It is interesting to note then that there are siginficant differences in the nature of planning as a function of size of firm and type of ownership. Smaller sized firms spend a considerably larger portion of their time on "fire fighting" and short range planning, in comparison to larger firms. However, the nature of planning is affected by ownership type at every size classification. It is the Canadian firm, as opposed to its American owned counterpart that spends a smaller portion of its time on long range planning and engages in a short term "fire fighting" approach to planning activities.

# Organization and Control

Management analysts and sociologists can compare organizations on their degree of formalization, the reliance on written policies, procedures and instructions (see Hall [1972] Organizations: Structure and Process). Five questions in the Siegel/Hecht study refer to the degree of formalization:

- extent of reliance on policies and procedures,
- to what extent are duties and accountability documented in procedures and job descriptions,
- to what extent is performance appraisal based on written performance standards or criteria,
- to what extent have control systems been established
- in writing,

- to what extent are written documents (budgets, schedules, project specifications, program plans, etc.) used as an integral part of the job.

Responses to these questions showed little variation with size of firm. Overwhelming and highly significant differenceswhere found in the responses of executives from Canadian and American owned firms. Canadian firms appear to be lagging behind their American counterparts in the degree of reliance on formalization. To the extent that formalization provides order and standardization in a firm, reduces ambiguity by specifying desired performance, Canadian firms are experiencing a significant deficiency. This could be reducing the efficiency of management in Canadian firms.

#### Supply

Harbison and Myers (1958), in their study, Management in the Industrial World, noted that as industrialization advances the proportion of managerial resources in the labour force must increase in the industrial society. If we adapt this analysis to study individual firms and control for the size of these firms, we observe that Canadian owned firms tend to have a significantly lower management/employee ratio. To some extent the number of managers per a given sized employee force represents a potential resource contributing to the efficiency of the firm. Canadian firms seem to be getting along with less managerial resources.

### Education, Training & Development

Training and development represents a systematic way for an organization to meet its manpower needs, for upgrading skills, and for adapting to technological change. Potentially, training and development

activities can be a most powerful set of mediators to increase managerial efficiency. It is interesting (and discouraging) to observe the two patterns of results encountered in our study. First, and quite understandably, smaller firms do less in the area of training and development for managers, supervisors, clerical and blue collar workers. Second, Canadian firms, at every size category place less of an emphasis on training activities. In addition, Canadian firms are more reluctant to subsidize the tuition of their employees and contribute to their self-development program. When we examine the frequency of use of "outside" sources of information and education, the Canadian-American differences persist. Canadian firms make significantly less use of programs offered by academic institutions, major corporations or government as well as their own government's publications.

### Technology

The size of an organization is significantly related to both the degree of automation as well as reliance on computers. This raises questions about the ability of our generally smaller Canadian firms in the manufacturing sector. When size of firm is controlled, there is little difference in degree of automation but a substantial and significant difference emerges in the use of computers. If one places a positive value on the benefits accruing from computerization then Canadian firms are again disfavoured.

#### Intensity of Competition

The nature of competition can be a significant mediator on the resources of the firm. It is interesting to note that regardless of

competitors than their American owned counterparts operating in Canada. However, it is the American owned firms who report a significantly higher degree of innovation originating out of competition. To coin a popular phrase with regard to competition, Canadian executives "are getting more and enjoying it less".

Fast delivery, meeting specifications, and service are three areas in which Canadian firms report significantly more intense competition than their American owned comparison group.

#### Financial Resources

The chief executives responding to the Siegel/Hecht survey were asked to reflect on what they consider to be their major problems. Shortage of capital was seen as a far more serious problem by executives in Canadian owned firms. Concern over sources of capital seems to drain off concern from other problem areas for these executives. Failure to adapt to change, lack of planning, poor marketing and sales, lack of skills and experiences were seen as more serious problems for executives in U.S. owned firms. Evidence that shortage of capital is a salient and distracting problem for Canadian firms can be found in responses to two additional queries: "Have you attempted to obtain financial aid?" The responses of executives from Canadian owned firms were significantly more affirmative suggesting that in the struggle for survival, energy is being drained away from other problem areas.

Chief executives were asked to rate the <u>profitability</u> of their firm relative to the industry norm. Both the size and ownership trends emerged with Canadian owned firms being rated lower in profitability.

The same two trends (size & ownership) are reflected in sales, net worth, and pre-tax profit figures supplied by these executives.

# Planning

Table 1

Percentage of Time Spent on Short Range (Less than 1 yr.) as Opposed to Long Range or Medium Range Planning

Size	Canadian	U.S. Owned	
< 125 125 - 200 > 200	73.55 72.00 59.22	61.74 59.10 58.04	
	$F_1 = 2.99$	s.g.	.05 *
٠.,	$F_2 = 7.49$	<b>.</b>	.007 **
	$F_3 = NS$		

# Organization and Control

Table 2

General Question: How much Reliance is placed on written policies and procedures? (Scored on a 1-5 scale)

Size	Canadian	U.S. Owned
< 125 125 - 200 > 200	2.40 2.63 2.63	2.80 3.00 3.11
· ·	F <sub>1</sub> = NS	
•	$F_2 = 8.56$	sig. at .004 **
	F <sub>3</sub> = NS	

Table 3

Specific Question: To what extent are duties and accountability documented in procedures and job descriptions? (Scored on 1-7 scale)

Size	·	Canadian	<u>.</u>	J.S. Owned	
< 125 125 - 200 > 200		3.38 3.86 4.09		5.41 4.33 4.83	
		F1 =	NS · ·	•	·
		$F_2 = 15$	.47	Sig. >	.001 ***
		$F_3 = 3$	.09	~	.05 *

Table 4

To what extent is performance appraisal based on written perforformance standards or criteria? (Scored on 1-7 scale)

Size	Canadian	U.S. Owned
< 125	2.51	3.86
<b>125 - 200</b>	2.86	4.00
> 200	3.29	4.57
	F <sub>1</sub> = NS	
	$F_2 = 22.21$	Sig. > .001 ***
	$F_3 = NS$	1

Table 5

To what extent have standards of performance and control systems, been established in writing? (Scored on 1-7 scale)

<u>Size</u>	Canadian	U.S. Owned
< 125 125 - 200 > 200	3.01 3.89 3.93	3.73 4.52 4.44
<b>.</b>	$F_1 = 3.79$	.02 *
· · · · · · · · · · · · · · · · · · ·	$F_2 = 4.81$	.03 *
,	$F_3 = NS$	

Table 6

To what extent are written documents (budgets, schedules, project specification, program plans, etc.) used as an integral part of job?

Size	Canadian	U.S. Owned
< 125 125 - 200 > 200	4.24 4.75 4.79	5.18 5.54 5.42
	F <sub>1</sub> = NS	
	$F_2 = 8.52$	sig. at .004 **
,	$F_3 = NS$	

### Supply

Table 7

Average Number of "Managers"

Size	Canadian	U.S. Owned
< 125	3.98	6.04
125 <b>-</b> 200 <b>-</b> 200	7.91	10.20 44.58
> 200	30.02	44.38
	$F_1 = sig. a$	t > .001 ***
	$F_2 = sig. a$	t .05
	$F_3 = NS$	

### Education & Training

Table 8

Frequency of Use (On a Scale of 1-7)

### a] Academic Programs

Size	Canadian	U.S. Owned
< 125 125 - 200 > 200	2.37 2.83 2.83	3.56 3.27 2.77
	F <sub>1</sub> = NS	
	$F_2 = 6.58$	.01 *
	$F_3 = 3.23$	.04 *

### b] Programs Offered by Major Corporations

Size	Canadian	U.S. Owned
< 125 125 - 200	2.97 4.20	4.65 4.17
> 200	3.43 F = NS	5.05
	$F_1 = NS$ $F_2 = 17.11$	> .001 ***
, ,	$F_3 = 4.51$	.01 *

Table 8 (continued)

### c] Professional Association Programs

Size	Canadian	U.S. Owned
< 125	3.55	3.67
125 - 200	4.32	4.28
> 200	4.14	4.71
	$F_1 = 3.63$	.03 *
	$F_2 = NS$	
	F <sub>3</sub> = NS	

### d] Business Periodicals

Size	Canadian	U.S. Owned
< 125	3.53	4.71
125 - 200	4.85	4.46
> 200	5.07	5.00
• • • • • • • • • • • • • • • • • • • •		
	$\mathbf{F}_1 = 4.74$	.01 **
	$\mathbf{F}_2 = \mathbf{NS}$	
	$F_3 = 3.87$	.02 *

### e] Government Courses

Size	Canadian	U.S. Owned
< 125 125 - 200 > 200	2.09 2.69 2.48	3.25 2.20 2.47
	F <sub>1</sub> = NS	
·	F <sub>2</sub> = NS	
	$*F_3 = 4.65$	.01 **

<sup>\*</sup> This significant interaction shows that for small companies the U.S. owned firms make much more use of Canadian government courses.

Table 8 (continued)

### Government Publications

Size	Canadian	U.S. Owned
< 125 125 - 200	2.54 3.40	2.94 4.15
> 200	2.24	3.61
	$F_1 = 5.01$	.008 **
	$F_2 = 3.54$	.05 *
	$F_3 = NS$	

Table 9

Do you subsidize tuition for your employees?

Size	Canadian U.S. Owner	<u>ed</u>
< 125 125 - 200 > 200		;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
	$F_1 = 6.8$ .002	**
•	$F_2 = 28.83 > .001$	k**
	$F_3 = 6.38$ .002 *	<b>.</b> *

### Note

Chi square statistics were calculated on the percentage of firms who have "in-house" programs for employees, supervisors and managers. Results clearly indicate that in each area and in each size grouping U.S. owned firms made more significant investments in development programs.

### Technology

Table 10

Degree of Automation (Scored on 1-5 scale)

<u>Size</u>	Canadian	U.S. Owned
< 125 125 - 200 > 200	2.66 2.81 2.96	2.54 2.90 3.04
	$F_1 = 4.13$	.02 *
·	$F_2 = NS$	
,	$F_3 = NS$	

Reliance on Computers (Scored on 1-5 scale)

Size	Canadian U.S. Owned
< 125 125 - 200 > 200	1.41 2.21 2.30 2.62 2.26 3.12
	F <sub>1</sub> = 14.33 > .001 ***
: · · · · · · · · · · · · · · · · · · ·	$F_2 = 22.48$ > .001 ***
	$\mathbf{F}_3 = \mathbf{N}\mathbf{S}$

Table 11

### Intensity of Competition

a] Number of Serious Competitors (1=1, 2=2, 3=3-5, 4=6-15, 5=15+)

Size	Canadian	U.S. Owned
< 125 125 - 200 > 200	3.38 3.25 3.16	2.88 2.67 3.00
1	$F_1 = NS$	3.00
	$F_2 = 9.32$	.003 **
ì	$F_3 = NS$	

b] Innovation Originating out of Competition

Size	Canadian	U.S. Owned
< 125 125 - 200 > 200	.31 .48 .44	.48 .73 .93
	$F_1 = 2.50$	.08
	$F_2 = 7.76$	.006 **
	$F_3 = NS$	

c] Intensity of Competition - Service
(Higher number indicates more intense competition)

Size	Canadian	U.S. Owned
< 125 125 - 200 > 200	5.87 5.53 5.46	5.13 5.14 5.19
	$F_1 = NS$ $F_2 = .05 *$	
	$F_3 = NS$	

Table 11 (continued)

Intensity of Competition - Fast Delivery

Size	Canadian	U.S. Owned
< 125 125 - 200 > 200	5.52 5.27 5.46	5.13 4.90 4.67
	$F_1 = NS$	
	$F_2 = 6.26$	.01 *
	$F_3 = NS$	

Intensity of Competition - Meeting Specifications

Size	Canadian	U.S. Owned
< 125 125 - 200 > 200	4.96 4.60 4.85	4.29 4.23 4.00
	F <sub>1</sub> = NS	
· · · · · · · · · · · · · · · · · · ·	$F_2 = 6.73$	.01 *
	$F_3 = NS$	

Table 12

Is <u>Shortage of Capital</u> a Major Problem? (Larger number indicates more serious problem.)

Size	Canadian	U.S. Owned
< 125 125 - 200 > 200	2.12 2.25 1.98	1.56 1.59 1.52
	F <sub>1</sub> = NS	• • • • • • • • • • • • • • • • • • • •
•	$F_2 = 10.97$	.002 **
	$F_3 = NS$	

### Outcomes

Table 13

Each chief executive was asked to rate the profitability of his firm on a seven point scale.

Size	Canadian	U.S. Owned
< 125 125 - 200 > 200	4.46 4.95 5.23	5.08 5.30 5.33
	$F_1 = NS$	<b>.</b>
	$F_2 = 3.58$	.05 *
,	$F_3 = NS$	

Average level of sales in last 3 years.

Size	Canadian	U.S. Owned
< 125 125 - 200 > 200	164,732 584,082 1,546,571	456,389 615,769 2,096,250
	$F_1 = 39.09$	< .001 ***
	$F_2 = 3.86$	.05 *
	F <sub>3</sub> = NS	

### APPENDIX I

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### APPENDIX LI

### . STRUCTURE

### SURVEY FORM

	· · · · · · · · · · · · · · · · · · ·
1.	Number of full time employees in the organization?
2.	Of this total, how many are managers?
3.	Age of the firm (in years)
4.	How many levels of management are there in your organization?  (from 1st line supervisor to president)
5.	How many subordinates report to you as the Chief Executive Officer?
6.	How many subordinates report to the First Line Supervisor?
7.	Is your firm
	(a) A Proprietorship?
•	(b) A Partnership?
	(c) A Limited Private Company?
	(d) A Limited Public Company?
	(e) A Public Company on the Exchange?
8.	In this firm are you
•	
\	(a) The Founder?
	(b) A member of the Founder's family?
,	(c) Neither
9.	What is your age?
	under 30;30-39;40-49;50-59;60 or over
• •	
10.	Is the majority of the firm's ownership
	(a) Canadian?
	(b) American?
	(c) Other (please specify)
	The state of the s
11.	Position of respondent
	Title

В.	NNOVATION			
	12.	Has your firm been successful in introducing a innovation in the last five years	my relatively	major No
		(a) in your product line?	105	NO
		(b) in your marketing techniques?		
		(c) in your manufacturing facilities?		
		(d) in the amount and direction of your research effort?	and the state of t	1
`		(e) in the background, training, and technical skills of your employees - sales, manufacturing, research, or management?	-	SALUTERIA
		(f) Other (please specify)		540
•	13.	Please describe what stimulated your major in	ovation in an	y area
	14.	From what source or sources did the innovation	originate?	
٠,		(a) academic		
	•	(b) trade journals		
		(c) consultants		
		(d) competition	•	
		(e) result of consumer or industrial demand	***	
		(f) internally generated		
			r .	
). `	COMPETITION			
,	15.	Which of the following represent your two main in order of importance?	n sources of c	ompetition 1 and 2)
		(a) imports		
		(b) major corporations operating in Canada	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
		(c) small Canadian enterprises	-	
		(d) government		

In the following questions (and similar ones), the idea is to circle the number which best describes your opinion. If, for example, in the following question you considered that price was a very intensive part of competition you would circle 7, if you considered it unimportant, you would circle 1, if in between, then circle one of the numbers from 2 to 6 to show the degree of intensity you place on price.

16.	How intensive are the following a (Circle appropriate answer)	reas		inter			our		try? nsive
	(a) price		1.	2	3	4	5	6	7
	(b) design or quality of product		1	2	3	4	5	6	: 
•	(c) prompt delivery		1	2 ',	3	4	5	6	7
	(d) flexibility to meet consumer specifications		1 ·	2	3	. 4	.· 5	6	7
	(e) service		1	2 `	3	4	5	6	7
17.	Which of the following represents (please check one only)  (a) price	your	mair	n com	petit	ive a	dvan	tage?	
`	(b) design or quality of product			٠.				· :	
	(c) prompt delivery		- <del></del>				٠,		
	(d) flexibility to meet consumer	Spec	ifica	ation	; S , - ,				`
•	(e) service			• • • • • • • • • • • • • • • • • • • •	•		. : : :	, .,	•
18.	How many other firms manufacturin competitors? 1; 2; 3-5;				you 15+	consi	der	serio	ous
19.	Which of the following markets ar	e sup	plie	d by	your	firm?	1 .	•	•
• • •	(a) local						· .	,	٠.,
	(b) national				٠.,٠				J
	(c) regional				٠.	•	;		
	(d) international					:	.•		.:
20.	Of the following, select the one customers	which	rep.	resen	ts th	ie maj	jori t	yof	your
•	(a) consumer								
	(b) other companies					:	**	ì	
	(c) government			. /		,			· ·
21.	What percent of your total sales customer who took the largest sha		year	was	accou	ınted	for	by th	1e

	If you answered no to the provious question, har in the last two years with a takeover bid or an	ve yo	ou bee er to	n ap mer	pproa	-	es	
	AND TRAINING				` .			
24.	Circle the number of years of education you have	e con	plete	ed.				
	Grammar School High School Co	11ege			Grad	uate	Schoo	·1
	1 2 3 4 5 6 7 8 9 10 11 12 13 14	15	1.6		17	18	19	
25.	If you are a graduate of a university, please s	neci f	37	,			•	,
	(a) the degree you obtained	pecki	· y ·			` .	,	
	(b) the university attended						•.	
,	And the state of t		4/2-2		•			
26.	For each of the following please indicate whether (1) No Training Program (2) On-the-Job Train				arate	Tra	ining.	
	Use numbers 1, 2, or 3 to each part	.′				* .		
	(a) apprentices					1.		
	(b) operatives		•			· · .	•.	٠
•	(c) clerical	,	)		×			
٩	(d) supervisors			•			, , ,	
÷.	(e) managers		أهي ا					
					` .			
27.	Of the following, which sources of education or to keep you informed about business conditions,							
	used?	ang	HOW O	T. C. C. I	i erre:	CHO,	<b>y</b>	
			, ,	•	. *		• • • • • • • • • • • • • • • • • • • •	
	Available Yes No		Infr	educ	<u>ys</u> ently	ed	Ofte	1
	(a) academic programs (courses)		1 2			. 5	6	7
	(b) major corporations supplying				· , · .		٠.	
	technical information		1 2	3	3 4.	. 5	6	7
	(c) professional associations		1 2	. 3	3 4.	5	6.	7
	(d) trade publications,		1 2	3	3 4	₹5	. 6	7
	(e) business periodicals	٠ . `	1 2	3	3 .4	5,	6	7
	(1/C)		·1 2	3	3 . 4	· ·		
	(f) consulting services		i, Z		,	5	e.	7
	(g) government agency programs (courses)	Þ.	1 2	, -		5	6: . 6	7

In the last two years, have you acquired or merged with any other firm or have you been sequired. \_\_\_\_yes \_\_\_\_no

22.

28.	Does your firm subsidize tuition for employees wishing to take academic courses? yes: no; If yes, what percentage of total?
E. UNIONIZAT	ION
29.	Which of the following types of unions are represented in your firm?
	(a) international
-,	(b) national
	(c) regional
·	(d) company
30.	How many unions are representing your firm's employees?
31.	What percent of the firm's employees are union members?
32.	In the last 5 years, has you firm been affected by a strike among your suppliers or customers
, t	or within your firm
33.	Describe the effect of the strike or strikes on the firm's operations
d.	
-	
F. FINANCIAL	
34.	How often does your accountant and/or auditor prepare financial statemen
	(a) weekly
•	(b) monthly
•:	(c) quarterly
,	(d) semi-annually
	(e) annually
35.	Does your financial system provide information for answering the following
	questions? Yes. No
	(a) should the business be expanded?
•	(b) what lending sources should be tapped?
•	(c) what cost areas are cutting into profits?
	(d) are sales up to expectations?

36.	What is your company's:
•	(a) average level of net worth?
	(b) average level of pretax profits?
	(c) average level of sales?
	(d) average level of capital investment?
37.	How would you rate the profitability of your firm in respect to the
	industry? (Circle appropriate answer)
	Below industry norm Industry norm Above norm
	1 2 3 4 5 6 7
38.	Have you made any attempts to obtain additional financing during the last two years? yes no
39:	If yes, were you successful?yesno
40.	From what sources was this obtained?
,	
٠.	그는 어린 그는 사람들은 사람들은 사람들은 이 왕이 되는 것이 되었다.
41.	Are there any federal programs for which you firm could apply
•	for financial and/or technical aid? financialyesno
	technical yes no
42.	Are there any provincial government aid programs for which you
	can apply?
43.	Have you applied to any such programs?
44.	If yes have you been successful in obtaining government aid?yes What forms of tax assistance would be of use to your firm
45.	
	Yes No
	(a) open capital depreciation allowance
	(b) tax incentives to exporters
	(c) tax allowance to firms competing with imports
	(d) reduction in corporate taxes
	(e) corporate tax structure based on a step-
	(f) others (please specify)

	•	46.	Of the follow mode of opera		ost a	accurate	ly déscr	ribes your con	mpany's	primary
1			· 1	, ' <b>2</b>		3	· ·	4		5
	<i>;</i> ,		Unit Batch (locomotive)	Small Bot (by 10's		Large (by 1	Batch 00's)	Continuous Flow (oil & Chemic		Production (assembly)
		47.	How broad or a (Circle the no						our or	ganization?
			Extremely Narrow	1 2	3	4	5 - 6	7 Extrem Broad	nely	
		48,	How much are	activities s	equen	ced in	your com	pany's work f	low?	,
			Very little sequencing	1. 2	3	4	5 6	7 A grea deal	ıt.	,
÷	,	49.	How (technica company?	lly) sophist	icate	d is th	e manufa	cturing equip	ment i	n your
			Not very sophisticated	2	3	4	5 6	7 Very sophis	ticated	<b>i</b>
· .		50.	What percent of from other inc		1 raw	, materi	als cons	ists of techn	ical p	roducts
	, * n	51.	To what degree	e is your pr	oduct	ion aut	omated?	(circle appro	priate	number)
			Manual	Little Automation	,	Semi- Autom		Mostly Automat	ed	Fully Automated
		52.	What is the en	ctent of you	r fir	m's rel	iance on	computers?		
	:		1 None	2 slight		3 mode	rate	4 conside	rable	5 extensiv
н. <u>о</u>	BJEC'ı	<u>tves</u>							-	
		53.	What are your priority to fi	lrm : (1 bei						
		•	(a) community	y welfare			(f) pr	ofit maximiza	tion	
			(b) organizat	tion stabili	ty		(g) or	ganizational	growth	**************************************
•			•	al leadershi	р		(h) or	ganizational	efficie	ency
Ì			(d) employee (e) high prod	welfare	-		(i) ot	her - please	specify	y
			•	_					*	

NATURE OF TECHNOLOGICAL PROCESSES

### STRENGTHS . WEAKNESSES

54. Using the scales shown please rate the extent to which the items below are problems in your firm

	Not a	proble	m` `	Modera	ite	Serious problem	
(a) Failure to adapt to	o change	1	2	3	4	5	
(b) shortage of capital	L · · · · · · ·	1	2	3	4	5	
(c) managerial incompet	tence	1	2	3	4.	5	
(d) lack of planning		1	.2	3 (	4	5	
(e) lack of budgeting	and control	1.	. 2	. 3	· , 4.	5	
(f) poor marketing and	sales	.1	2	~ 3	4	- 5	t
(g) lack or imbalance of experience	of skills and	1	2	3	Z <sub>‡</sub>	5	

55. Using the same scale rate the following as typical of your firm

	Least strength Mod	erate	Great	
			stren	gth
(a)	ability to be flexible 1 2 3	4	5	. ,
(b)	ability to specialize to a greater extent than larger firms 1 2 3	4	÷ 5	
(c)	ability to meet market needs that larger firms cannot meet 1 2 3 enterprising nature of the	. 4	. 5	e e
(a)	management 1 2 3	. 4	5	
(e)	other (specify) 1 2 3		¥ 5	

56. Do you feel that it is essential (desirable?) for the Federal Government to develop a small business bureau whose sole function would be to provide financial and technical assistance to small firms?

yes	 •		no	-	,
٠.					

57. Briefly, what has been your firm's most pressing problem and how has it been solved?

	56.	Wilat	has been you	I most	51 };(	IJ. I I C	::::::::::::::::::::::::::::::::::::::	COMP	LISIM	ent in t	ints organ.	LZACIOIII
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	59.		his question ating and dec									
•		opez	acting and act	<del></del>					•		· · · · · · · · · · · · · · · · · · ·	
	•	(a)	Routine	1	2	3	. 4	5	6	7 💉 .	Not R	outine
		(b)	Uncertain	1	2	3	4	5	6	7	Certa	in
		(c)	Stable .	1	2 .	3	4	5	6	7	Chang	ing
•		(d)	Complex	1	2	.3	4	5 ~	6	7	Simp1	е
		(e)	Standardized	1	2 ′	3	4	5 .	6	7	Not s	tandardia
•		(f)	Familiar		3 1 1 1 1							
	•		Problems	1	2	. 3	4	5	6	7	Novel	Problems
		<b>(</b> g <b>)</b> <sup>(</sup>	Flexible	1	2	3	-4	5 .	6	7	Rigid	
		(h)	Predictable	1	2	3	4	·5·	6	7	Unpre	dictable
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,	3					• 1	***	•				
	60.		often are emp								adopt th	eir cwn
		appi	oach, to their	Jobsi	(0)	LCLC	appr	opriid	· · · ·	13 7 (3.7)		
		(1)	Always (2)	Often	(3	3) So	metim	es	(4)	Not Ofte	en (5) N	ever
						•						
·.	61.	What	percent of y	our ti	me is	inv	olved	with				
•		(0)	short range	mattar	.a · /1	lonn	than	1 was	m1			
		(a)		X +		:				1	* * * * * * * * * * * * * * * * * * * *	• •
		(b)	medium range		•					·	· · · · · · · · · · · · · · · · · · ·	
		(c)	long range m	natters	(ove	er 3	years	)				
	62.	How	would you des	cribe	compa	anv <sup>i</sup> s	reli	ance	on bo	olicies a	and proced	ures?
			- ·	•					•			
		(1)	Very informa	(2)	THE	OF INSET	. ·(১)	rer	HEL	CAN FOL	mar (3) A	GLA LOLIN

63. The following statements describe various characteristics of jobs or organizational conditions that may or may not exist in the company

	each statement you are asked to le appropriate answer)	How Desirable How True
•	Duties, authority and accountability are documented in policies, procedures or job descriptions.	Not Very False Tr  desirable  1 2 3 4 5 6 7 1 2 3 4 5 6
,	Performance appraisals are based on written performance standards or criteria	1 2 3 4 5 6 7 1 2 3 4 5 6
	Standards of performance and control systems have been established in writing	1 2 3 4 5 6 7 1 2 3 4 5 6
	Written documents (such as budgets, schedules, project specifications, procedures or program plans, job descriptions, etc.) are used as an integral part of job.	1 2 3 4 5 6 7 1 2 3 4 5 6

THANK YOU VERY MUCH FOR YOUR CO-OPERATION.

## Basic Talephone Protbool: Small Businesses

Good menning. This is Mr. (Mrs.) or Toronto. May I speak with Mr.	[rom the University Executive's Name).
---	--

If Not in...Request time to return call. Do not leave telephone number.

10	Exacutive:		
ir.	, my name	is I am calling	
for	Professor Siegel of	the Faculty of Management Studies	1.

at the University of Toronto. Professor Siegel is currently conducting a study of Canadian Businesses and would like to enlist your cooperation.

The purpose of the study is to learn more about factors associated with the operation of businesses in Canada. From this, we expect to identify the types of assistance which would be most useful to Canadian firms in the future.

Since your firm represents an important segment of the business community, we would appreciate the opportunity to talk with you about your company's experiences. This will take about an hour or less of your time.

Can we arrange	an appointme	ent for	one of	our res	earch to	eam
members to mea	t with you?	Say on		. Would	you be	available
ator		?		×		

Fine. Then the appointment is for (REPEAT DATE, DAY TIME, ETC.)
If you should need to change the date for any reason, please
call Mrs. Nooten at 928-5290.

Thank you for your cooperation. I am sure you will enjoy this opertunity to contribute to the Business Study.

APPENDIX III- INTERVIEW PROTOCOL B

Desic Interview Protocol: Pilot Test

Small Business Study

Inivational Statement

by Professor Siegel of the Faculty of Management Studies at the University of Toronto. The purpose is to learn more about the operation of businesses in Canada and ways in which they can be assisted.

There are a number of questions I would like to ask you this marring. Sefore we begin, however, let me assure you that this cludy is being conducted in the strictest of confidence.

information you may contribute to the study will be known only to the recommens. We will not be doing any analyses of individual companies. The data from all the company executives we interview will be combined and analyzed on an aggregate basis. I hope you feel confident, then, that the identity of your company and your answers to the questions will be kept anonymous.

### SIVE EXECUTIVE COPY OF QUESTIONNAIRE

Here is a copy of the questions I will be asking you. If there are any questions you cannot or do not wish to answer, please let me know and we will skip them.

Unless you have questions --- pause --- we might as well begin.

1. Recheck Major Business

2. · " Executive's Position

3. Tenure with Company

### UNIVERSITY GRANT PROGRAM RESEARCH REPORTS

### RAPPORT DE RECHERCHE SUR LE PROGRAMME DE SUBVENTIONS AUX UNIVERSITES

	AUTHOR(S)/AUTEUR(S)	UNIVERSITY/UNIVERSITE	REPORT TITLE/TITRE DE L'OUVRAGE		
1.	1.A. Litvak C.J. Maule	Department of Economics, Carleton University.	Canadian Entrepreneurship: A Study of Small Newly Established Firms, October, 1971.		
2.	Harold Crookell	School of Business Administration, University of Western Ontario.	The Transmission of Technology Across National Boundaries, February, 1973.		
3.	M.H.E. Atkinson	Faculty of Graduate Studies, University of Western Ontario.	Factors Discriminating Between Technological Spin-Offs and Research and-Development Personnel, August, 1972.		
4.	R.M. Knight	School of Business Administration, University of Western Ontario.	A Study of Venture Capital Financing in Canada, June, 1973.		
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6.	F. Zabransky J. Legg	School of Business Administration, University of Western Ontario.	Information and Decision Systems Model for PAIT Program, October, 1971.		
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11.	I.A. Litvak C.J. Maule	Department of Economics, Carleton University.	A Study of Successful Technical Entrepreneurs in Canada, September, 1972.		
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13.	Carl Prézeau	Faculté d'administration, Université de Sherbrooke.	The Portfolio Effect in Canadian Exports, May, 1973.		
14.	M.R. Hecht J.P. Siegel	Faculty of Management Studies, University of Toronto.	A Study of Manufacturing Firms in Canada: With Special Emphasis on Small and Medium Sized Firms, December, 1973.		
15.	Blair Little	School of Business Administration, * University of Western Ontario.	The Development of New Industrial Products in Canada. (A Summary Report of Preliminary Results, Phase I) April, 1972.		
16.	A.R. Wood J.R.M. Gordon R.P. Gillin	School of Business Administration, University of Western Ontario.	Comparative Managerial Problems in Early Versus Later Adoption of Innovative Manufacturing Technologie (Six Case Studies), February, 1973.		
17.	S. Globerman	Faculty of Administrative Studies, York University:	Technological Diffusion in Canadian Manufacturing Industries, April, 1974.		
18.	M. James Dunn Boyd M. Harnden P. Michael Maher	Faculty of Business Administration and Commerce, University of Alberta.	An Investigation into the Climate for Technological Innovation in Canada, May, 1974.		
19.	K.R. MacCrimmon A. Kwong	Faculty of Commerce and Business Administration, University of British Columbia.	Measures of Risk Taking Propensity, July, 1972.		
20.	I.A. Litvak C.J. Maule	Department of Economics, Carleton University.	Climate for Entrepreneurs: A Comparative Study, January, 1974.		

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### 26. Blair Little R.G. Cooper

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29. Blair Little

30. R.G. Cooper

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Factors of Success and Weakness Affecting Small and Medium-Sized Manufacturing Businesses in Quebec, Particularly those Businesses using Advanced Production Techniques, December, 1973.

Facteurs de Succes et Faiblesses des Petites et Moyennes Entreprises Manufacturieres au Québec, Specialement des Entreprises Utilisant des Techniques de Production Avancees, decembre, 1973.

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- 39. James C.T. Mao
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### REPORT TITLE/TITRE DE L'OUVRAGE

Foreign Ownership and Technological Innovation in Canada: A Study of the Industrial Machinery Sector of Industry, July, 1975.

Lease Financing for Technology-Oriented Firms, July, 1975.

An Investigation into the Climate for Technological Innovation in Canada.

Stage II - A Fundamental Research Effort Directed Towards the Design of an Experimental and Management Development Program for Research and Development Project Selection Decisionmakers, July, 1975.

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