

WORKING PAPER

**RESTRUCTURING IN CANADIAN
INDUSTRIES: A MICRO ANALYSIS**

*Working Paper Number 23
June 1998*



Industry Canada Industrie Canada

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**RESTRUCTURING IN CANADIAN
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TABLE OF CONTENTS

INTRODUCTION.....	1
THE SETTING.....	3
A Conceptual Framework.....	3
Data Sources.....	9
RESTRUCTURING IN CANADIAN COMPANIES.....	11
Extent of Restructuring in Canadian Firms.....	11
Reasons, Forms and Goals of Company Restructuring.....	13
Goals of Company Restructuring.....	19
EFFECTS OF RESTRUCTURING ON COMPANY ORGANIZATIONAL STRUCTURE AND PERFORMANCE.....	21
Effects of Restructuring on Company Organizational Structure.....	21
Effects of Restructuring on Company Performance:	
Costs, Revenues, Productivity and Employment.....	22
Cross-Firm Models for Estimating the Immediate Effects of Restructuring on a Company's Profitability.....	23
CONCLUDING REMARKS AND POLICY IMPLICATIONS.....	27
APPENDIX A: NAMES OF CANADIAN COMPANIES SURVEYED.....	31
APPENDIX B: QUESTIONNAIRE.....	33
BIBLIOGRAPHY.....	39
INDUSTRY CANADA RESEARCH PUBLICATIONS.....	41

INTRODUCTION

Over the last 15 years, many Canadian companies have improved their profitability, productivity and international competitiveness by restructuring their core business processes and functions, and their organizational structures. Restructuring, which is directly linked to a company's strategy and business goals, provides a focussed vision for all improvement initiatives at the micro or company level. It is a part of the radical global changes in the management of business firms under way in many industrialized countries. At the moment, we do not understand how and to what extent restructuring has affected company performance in Canada. The general purpose of this study is to fill this knowledge gap. In particular, it will answer the following four research questions:

- What are the general and specific factors that have fuelled restructuring in Canadian firms?
- What is the general pattern of restructuring practices in Canadian companies? What are the various forms of restructuring in Canadian industries?
- Why has restructuring been successful in some companies? Can Canadian firms learn some lessons from this experience?
- What are the effects of restructuring on company profitability, productivity and employment?

This is a micro, company-based study. The basic data for the research have been compiled from an interview survey of individual Canadian companies. Restructuring includes several corporate improvement programs such as downsizing or rightsizing, total quality management (TQM), re-engineering and outsourcing. It seeks substantial improvements in performance goals, which may include improved product quality, higher profitability and productivity, lower production costs, as well as greater flexibility, speed, accuracy and customer satisfaction. These goals are often pursued concurrently. In many cases, restructuring takes a holistic approach to business improvements, covering both the technical aspects of processes and products (technology, standards, procedures, systems and controls) and the social aspects (organization, staffing, company policy, jobs, career paths and incentives).

The study is divided into four sections. "The Setting" describes the conceptual framework used in the paper, and the sources of statistical data. "Restructuring in Canadian Companies" outlines the various modes of restructuring and the frequency of their use in Canadian corporate restructuring. In addition, this section analyses why companies may initiate restructuring and the goals they may set for their restructuring plans. The following section discusses the effects of restructuring on company performance and organizational structure. It also describes the form of benefit services provided to workers who are laid off as a result of restructuring. The concluding section answers the question of whether corporate restructuring is successful, and why. It also shows what role government programs have played in corporate restructuring in Canada.

THE SETTING

A Conceptual Framework

Canadian business firms are always adjusting to changes in the marketplace. This form of business restructuring is one of the ongoing, dynamic, competitive processes of the economy. It transforms the organization by reframing its corporate directions or its market focus, by rationalizing its production processes or its structure, by merging it with other companies, or by taking over other businesses. The sources of organizational change include a variety of long-term factors, such as demographic shifts, technological changes, the emergence of new competitors, and changes in consumers' tastes or in public policies. If companies do not adjust to these socio-economic trends, they either decline or disappear from the marketplace.

In recent years, these trends have become more rapid, powerful, discontinuous and chaotic than ever before. A combination of unprecedented global competitive and technological pressures "is forming the vortex of what we have begun to call the information age" (Champy and Nohria, 1996, p. xiii), making our global marketplace more complicated and turbulent. The cycle of change will quicken in the future, resulting in a radical transformation of business. Management thinkers have called the cycle a paradigm shift. There are no specific theories in industrial organization to explain the growing phenomenon of business restructuring. However, many management thinkers, such as Peter Drucker, Thomas Peters, Michael Hammer, James Champy and Charles Handy, have done extensive research on organizational change. They have focussed on change in terms of "how to generate it, how to respond to it, how to avoid being swept away by it" (Micklethwait and Wooldridge, 1996, p. 98). On the basis of this management research, we can develop a conceptual framework for analysing the restructuring of the business firm.

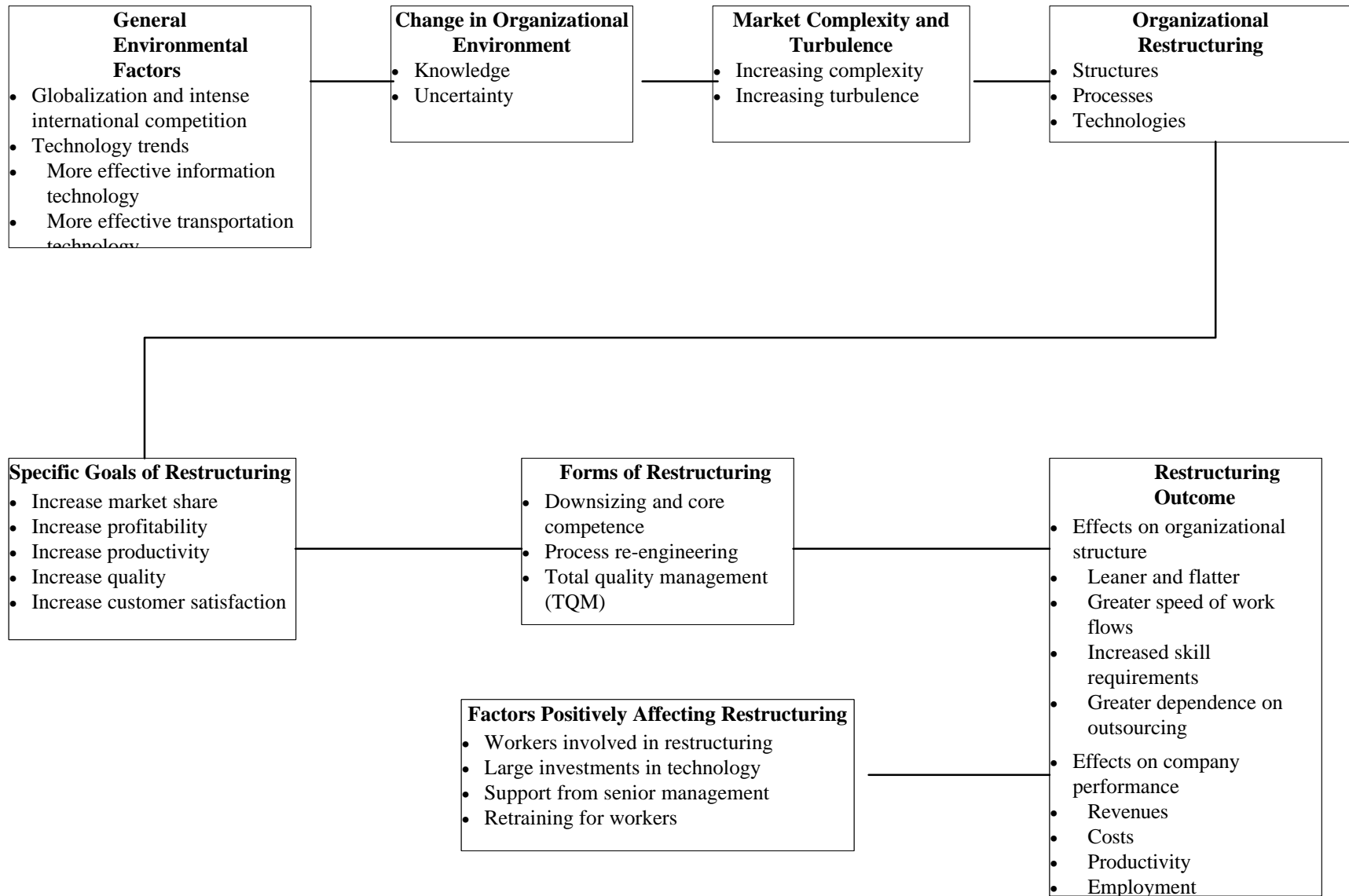
Figure 1 presents the analytical model used here. It has eight components: general environmental factors, including globalization and faster technology trends; changes in organizational environment; market complexity and turbulence; organizational restructuring; specific goals of restructuring; forms of restructuring, including methods of transforming the organization such as downsizing and core competence, process re-engineering and total quality management; restructuring outcomes; and factors positively affecting restructuring.

Sources of Organizational Change

The world economy has become more interdependent over the past 40 years. International linkages between nations have increased and resulted in substantially rising global pressures. "The changes surrounding us are not mere trends but the workings of large, unruly forces: globalization, which has opened enormous new markets and, a necessary corollary, enormous numbers of new competitors" (Stewart, 1997, p. 6).

Several factors have contributed to the trend toward globalization of the world economy. International trade liberalization, a consequence of the dismantling of trade barriers under successive rounds of multilateral (GATT) trade negotiations, has led to a significant expansion of world trade. Further, worldwide financial integration, driven by deregulation and privatization at the national level, and by major advances in communications and information technology, has resulted in substantial increases in the volume of foreign direct investment and in technology transfer between nation.

Figure 1
A Conceptual Framework for Analysing Restructuring of Canadian Companies



The new technology is more expensive to produce than was the technology it is replacing. This phenomenon is attributable to shorter product cycles, greater speed of new-product introduction, and the cross-fertilization of several scientific disciplines required to achieve innovative products and production processes. Given the high cost of research and development (R&D) and the need for complementary specialized factor inputs and skills, business firms have been compelled to be more innovative or dynamically competitive (Dunning, 1995, p. 468). Many firms have had to embark “on a path of continuous innovation to keep abreast or, preferably, forge ahead of equally innovation-conscious rivals” (Yoshino and Rangan, 1995, p. 51).

Intense global competition and rapid technological changes have made the marketplace more complex and turbulent. Individual events and trends differ in character, and their impact is more immediate than ever before. Today’s prosperous organization can lose market share to new competitors more quickly than in the past. For example, big firms such as IBM and General Motors are struggling to maintain their market positions.

Since changes in organizational environments are discontinuous, firms face not only increased market complexity and turbulence but also uncertainty in the marketplace. They have to make business decisions more frequently and implement them more rapidly. In this uncertain environment, companies find it hard to rely on previous experience as a guide for strategic planning. Marketplace uncertainty has forced them to question their assumptions about their competitive advantage, size and structure. Business visions, beliefs, structures, processes and technologies quickly become outmoded.

To cope with market uncertainty and turbulence, firms now rely more on knowledge and information. Whenever changes in organizational environments occur, companies use knowledge and information to redesign their structures, production processes, technologies and even products in order to make them compatible with new environments. The pressure on firms to restructure quickly will continue to increase since the stock of knowledge is expanding rapidly. Further, as a result of the spread of new information and communications technologies, new knowledge is spreading quickly across all sectors of the economy. Knowledge is increasingly important to the output of all industrial sectors, influencing the output level not only of the services sector but also of the goods sector. As Stewart (1997) notes, “Information has become the source of about three-fourths of value added in manufacturing” (p. 14).

In the past, firms often assumed that innovation, being knowledge-driven and knowledge-dependent, was an *exogenous* factor input, and that they could not influence its supply. By contrast, in the current view innovation is an *endogenous* input variable and its supply can be managed by business strategies and actions. For example, most management experts would now agree with the following statement: “The ability to produce good new products is not just a matter of luck and prayer. It can be planned, managed, and taught, just like any other aspect of a company’s work” (Micklethwait and Wooldridge, 1996, p. 132).

Moreover, most firms now agree that, in uncertain organizational environments, their competitive advantage must be grounded in knowledge and innovation. This kind of competitive advantage is sustainable over a longer period because rival firms cannot imitate it easily. Accordingly, companies are restructuring to make themselves into “learning organizations.” The learning organization continues to add new ideas to its stock of knowledge in three ways. First, it scours the world outside the company for ideas that can be adapted to its organizational structure and production processes. Second, it generates new ideas by promoting in-house R&D. Third, it obtains tacit knowledge by entering into strategic alliances with other companies. Tacit knowledge includes specialized capabilities that are embedded in company culture, internal routines, internal working relations, business practices and internal data bases. They can be learnt only by collaboration with other companies. Japanese and Korean companies were the first to realize the importance of tacit knowledge in building competitive advantage.

The learning organization makes sure that new knowledge, acquired from in-house research or from external sources, is used effectively in the company operation. It circulates new knowledge quickly inside the company, empowering workers through training and increased investment in information and communications technologies.

In sum, increased available knowledge and growing uncertainty (trends linked with the intensification of global competition and of technological change) are root causes of change in organizational environments. The two energizing forces — knowledge and uncertainty — act individually and interactively to bring about organizational change. Knowledge is a crucial factor and plays a dual role. It causes change in organization and also plays a vital role in redesigning the organization. Knowledge has thus become a more powerful and valuable strategic factor than plant size and access to natural resources. Success goes to organizations that acquire wide-ranging knowledge on a continuous basis and manage it most effectively. Examples are Microsoft, Toyota and Wal-Mart.

Forms of Organizational Change

Downsizing and Core Competencies

Companies have followed several methods in redesigning their organizations. Three restructuring approaches are most popular in North America. They include (a) downsizing and core competence, (b) re-engineering, and (c) total quality management (TQM). Many firms have achieved large improvements in costs, lead times, quality and customer service by using these approaches. It is important to note that the methods are distinct and cannot be applied in all situations. However, as we shall show, firms often mix features of the three methods when they restructure their organizations, processes and systems. During the 1960s and 1970s, many North American firms believed that competitive advantage was a function of size: greater size provided greater economies of scale and scope. Firms integrated horizontally and vertically through mergers and takeovers. They expanded middle management as well as corporate and administrative staff. Their business strategy was mainly based upon “growth” and “independence” in the marketplace, and upon such driving principles as “big is beautiful” and “bigger is better.” This growth strategy was appropriate during most of the period between 1960 and 1980, when overall rates of economic growth were higher and inflationary tendencies prevailed.

However, around the mid-1980s, when economic growth and inflationary tendencies slackened, business firms realized that a strategy of continuous growth and expansion was no longer appropriate. Contemplating changes in their organizational environments, they found that they were overstaffed and overmanaged, that they had become obese and had lost market focus. In addition, large size made companies less flexible. Large companies were less competitive and lost market share to small competitors that were nimble and adopted “lean” production methods.

From the late 1980s onward, to address problems of overstaffing, organizational obesity and loss of focus, several companies began organizational downsizing. According to one definition, downsizing is “a set of activities that are undertaken on the part of management, designed to improve organizational efficiency, productivity, and/or competitiveness. It represents a strategy that affects the size of the firm’s workforce and its work process” (Cameron, Freeman and Mishra, 1993, p. 24). It is often assumed that downsizing means layoffs and organizational decline, and the word thus may have a negative connotation. In fact, the attributes of downsizing are different.

Downsizing is an intentional decision: it is undertaken to adjust the organization to changes in the organizational environment. The goal is to improve the efficiency of the company and to contain and lower costs. The company accomplishes reductions in personnel by several approaches, such as layoffs, transfers,

outplacement, retirement incentives, buyout packages, attrition and so on. Further, downsizing often influences work processes, usually through the elimination or restructuring of work. It leads to the discontinuation of some functions, the merging of some organizational units and the disbanding of hierarchical levels.

Downsizing is also associated with the concept of core competencies. Several firms have undertaken downsizing by discarding non-core activities. A core competence is a collection of skills, capabilities and technologies giving an organization its unique character and its competitive edge in the marketplace. For example, Sony's competence lies in miniaturization whereas Motorola's involves fast product cycle time. By sticking to its core activities, a company is able to maintain a competitive advantage in the marketplace, and to adjust more efficiently and rapidly when organizational environments suddenly alter. Although the firm gives up some measure of control over non-core activities, it still requires input from those activities. It obtains that input either by outsourcing or contracting out, or by entering into strategic alliances with those performing non-core activities. Thus downsizing, core competencies, outsourcing and strategic alliances are interrelated.

Labour unions have been highly critical of the practice of downsizing, which they label a "slash-and-burn" strategy. In practice, downsizing has focussed only on cost reductions and layoffs of workers. It has resulted in the layoff of relatively more managers, professional staff, and administrative and technical employees. Downsizing has hurt not only those workers who are laid off but also those who keep their jobs. Economic insecurity has increased for both groups of workers. Downsizing has increased the fear of layoff among the surviving employees, and adversely affected their work motivation and corporate loyalty.

There is now a backlash against the way downsizing has been applied in the restructuring of organizations. Its narrow focus on reductions in personnel and labour costs has sometimes damaged organizational capacity. Downsizing has not stimulated investments in innovation and human capital, which are crucial to boosting long-term productivity growth. Organizations thus have to put more emphasis on building or upgrading core competencies and thereby improving the prospect of productivity growth.

Re-engineering — Business Process Redesign (BPR)

Re-engineering is defined as "the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed" (Hammer and Champy, 1993, p. 32). The approach is considered useful during periods of discontinuous change. It re-invents or redesigns the company by questioning all the assumptions underlying its production processes, systems and technologies. It starts with a clean slate and endeavours to achieve substantial improvements in productivity, cost reductions, quality management and cycle times. According to one author, "Figures of 70 and 80 percent are common in the case studies, and hundred fold improvements have been registered in some areas" (Kennedy, 1994, p. 261). The key features of re-engineering are as follows:

- It achieves substantial performance improvements by redesigning cross-functional and/or cross-departmental processes. These processes present the greatest opportunities for improvements.
- It transforms processes by minimizing the lead time required for the entire process and by granting decision-making powers to the lower levels of the company.
- Information technology (IT) often plays a critical role by making a process faster and paperless.

- Re-engineering usually eliminates hierarchical levels, resulting in a flat and lean company. Workers at the lower levels of the organization are empowered to make the appropriate decisions because they possess the relevant information and knowledge.
- In some respects, re-engineering becomes synonymous with the concept of downsizing. Like downsizing, it strives to cut costs and waste, and to do more with less in an organization. Consequently, re-engineering alters work flow processes and usually leads to reductions in personnel. Kennedy (1994) notes, “Redundancies are the dark side of re-engineering” (p. 265).
- Re-engineering occurs in stages and usually three criteria are followed in selecting the processes to be re-engineered. First, it takes on processes that are “in the deepest trouble” (Kennedy, 1994, p. 269). Second, it focuses on processes that have the greatest effects on customers. Third, it selects processes where re-engineering has the greatest chance of succeeding.

Best candidates for re-engineering include processes that are facing radical changes in the industry, that have not changed over a long period and thus need modernization and upgrading, or that clearly exhibit inefficiencies. Since re-engineering strives to obtain improvements in a short time frame, it tends to be disruptive. It is therefore important to complete re-engineering projects as quickly as possible.

Total Quality Management — Continuous Improvements

The concept of total quality management (TQM) was initially applied within Japanese organizations but it is now commonly used in redesigning North American organizations. Its principal goal is to develop a culture of continuous improvements in quality and customer service within the company. It requires organizations to alter their processes, systems and structures in such a way as to make a long-term commitment to achieving excellence in quality and service. TQM is founded on the following principles:

- *Empower workers:* TQM views workers as the most important source of ideas for improving an organization. Since workers at the lower levels of an organization have deeper first-hand knowledge and information about systems and production processes, they should be given greater authority to make operational decisions. Further, to make processes more flexible, jobs are redesigned to make them multi-skilled, and work in the organization is conducted in teams. These are called quality circles, self-managed teams and manufacturing cells. Teams are responsible for performing individual operations and for co-ordinating and improving them. Supervisors and managers act as team coaches and facilitate the allocation of resources to operational teams so that they can fulfil their missions.

In implementing TQM, a company emphasizes the role of building human capital formation on an ongoing basis: workers’ skills are upgraded continuously, and they are equipped with tools for process improvement. Training includes such subjects as effective team working, project management, statistical tools, problem identification and cause-effect diagrams, problem solving and process analysis, brainstorming and so on. The key feature of TQM is that it encourages teams to experiment and change their production processes, and to learn from their mistakes and successes.

- *Reduce variability in quality standard:* TQM requires that the organization strive to achieve a target quality standard with zero defects in components and final products. This is the quality “ideal” that the organization must endeavour to meet. The North American practice of meeting a quality standard within a given range is not acceptable under TQM. TQM sets a specific quality target and then reduces the numbers of parts and final products that deviate from it. For instance, a

Japanese company that follows TQM meets the target of, say, 98-per-cent defect-free final products whereas a North American counterpart meets the same standard “within tolerance variation.” In other words, the Japanese organization endeavours to “meet a target” while the North American company endeavours to meet a quality standard that is “good enough” (Keen and Knapp, 1996, p. 188).

- *Reduce waste:* TQM improves company performance by reducing waste in material management, time to market, errors and rework. The evolution of TQM is closely associated with the introduction of “just in time” (JIT) inventory management techniques developed by Toyota. The JIT system aims at minimizing waste and delay in material management by balancing the supply and use of components in production processes. The system replenishes the inventory “on an as-needed basis, thus avoiding wasting time because of out-of-stock situations and avoiding wasting money and space because of excess inventory” (Keen and Knapp, 1996, p. 189).
- *Management by facts:* TQM collects detailed quantitative data to diagnose operational problems and to monitor quality and other aspects of performance. On the other hand, the role of qualitative indicators and opinions is very limited in TQM.

The advantages of TQM are enormous because it motivates workers and generates substantial potential in the organization. Although short-term gains are minor, cumulative long-term gains can be significant. TQM does require a change in organizational culture that may take years to accomplish. Some firms become disillusioned with TQM when they do not see any impact on their profit lines in the short run. As a result, they dismantle the TQM program before it is complete.

A new role for TQM is now developing. As companies downsize and focus increasingly on their core competencies in their restructuring strategies, they are finding TQM — which stresses continuous step-by-step improvements in production processes — an ideal approach for upgrading competencies on a regular basis.

To sum up, in this section we have discussed the three organizational approaches that Canadian companies usually follow in restructuring their organizations. While we have presented these as three separate approaches, it is important to note that they are not mutually exclusive. Many firms often use all three approaches simultaneously in adjusting their organizations to changes in the organizational environment. A company usually selects elements from each method and prepares a new mixture for restructuring that is most appropriate to its situation.

Data Sources

At present, there is no micro-level data base describing the restructuring activities of Canadian companies. We have therefore collected relevant data from primary sources — that is, a sample of business firms that underwent restructuring during 1994–95.

The sample was chosen in a two-step procedure. First, the textual fields of the Compact D/Canada CD-ROM file — which contains financial and management information, company history, and company letter to shareholders for about 10 000 Canadian companies — were searched for words and expressions such as “restructuring,” “downsizing,” “re-engineering,” “total quality management” and “TQM.” The search revealed that, of 10 000 firms, 568 companies undertook some form of restructuring during 1994–95. All these companies are major public corporations with shares traded on all Canadian stock exchanges.

The 568 companies were then sorted by industry. From these industry strata, a subset of companies was selected for telephone interviews. With this procedure, it was possible to select a sample of 63

companies that had undergone some kind of restructuring in 1994 or 1995, and to collect consistent, detailed data on their restructuring experiences. Appendix A lists the names of companies that took part in the survey. They include many companies well-known in Canada, such as Air Canada, the Hudson's Bay Company, Hydro-Québec, Petro-Canada, Brascan Limited and the Bank of Nova Scotia.

Appendix B presents the questionnaire used for the survey. The interview questions follow very closely the elements of the conceptual framework we have outlined for analysing the restructuring of Canadian companies. The data collected through the interviews relates to objectives and forms of restructuring, the time the company has taken or will take to complete restructuring, the effects of restructuring on revenues, costs, productivity and employment, and the factors that contribute to the success of the company's restructuring strategy. The survey also generates information on the type of assistance provided by the government to companies that have undertaken restructuring.

RESTRUCTURING IN CANADIAN COMPANIES

Extent of Restructuring in Canadian Firms

The previous section was devoted to a discussion of general factors that have fuelled restructuring in Canadian companies, along with a description of the conceptual model used in this study. It provides the context for an analysis of the restructuring experience of our firms. In this section we shall examine the findings of the survey.

The present wave of restructuring in Canadian business is unique and unprecedented in two respects. First, it has hit harder on the labour-intensive services sector; second, it has displaced more white-collar workers such as middle managers, professionals and technicians — workers relatively more concentrated in the services sector. As Table 1 shows, more than half of the firms that have undergone restructuring in recent years belong to the services sector, including trade, financial, educational, health and community services, as well as transportation, communications and public utilities. In contrast, only one quarter of the companies that have restructured belong to the manufacturing sector, although restructuring is relatively deeper in that sector. While 18 percent of all Canadian companies belong to manufacturing, the share of manufacturing companies that have undergone restructuring is 25 percent.

Within the services sector, the finance, insurance and real estate (FIRE) industries have experienced more widespread restructuring. Over half of the firms that have restructured in this sector come from the FIRE group of industries. This finding is due mainly to the impact of information technology and the deregulation of financial institutions in Canada. In comparison, within the manufacturing sector, most of the companies that have restructured belong to such heavy industries as machinery and equipment, fabricated metal, electronic and electrical equipment, and transportation equipment. This finding can be attributed to the introduction of computers, numerically controlled machines and robotics technologies. On the other hand, within the manufacturing sector, fewer firms that have undergone restructuring belong to light manufacturing industries, such as food products, textiles and apparel, paper and paper products, etc.

Restructuring has been substantially less deep in Canada than in the United States. As Table 2 shows, this phenomenon is observed across all industrial sectors. For instance, the relative frequency of restructuring for the Canadian manufacturing sector is only 8 percent, whereas the comparable frequency ratio for the American manufacturing sector is 31 percent. The currently rising gap in productivity levels between Canadian and American manufacturing seems to be the result of much greater restructuring in the United States than in Canada.

As Tables 1 and 2 indicate, the services and manufacturing sectors are relatively more affected by the current restructuring phase. Since these industries are predominantly concentrated in central Canada, the burden of restructuring has fallen relatively more heavily on companies located in Ontario and Quebec. About two thirds of the firms that have undergone restructuring are situated in these two provinces (see Table 3). In comparison, primary industries, such as agriculture, forestry and fishery, are relatively less affected by the current wave of restructuring. Therefore, fewer firms in the Atlantic and Pacific regions are influenced by restructuring.

Table 1
Distribution of Firms That Underwent Restructuring by Industrial Sector,
Canada, 1994–95

Industrial sector	Canadian companies that underwent restructuring¹ (%)	All Canadian companies² (%)
Agriculture, fishery & forestry	0.5	0.5
Metal, oil extraction & non-metallic minerals	19.5	29.1
Construction	0.5	1.1
Manufacturing	25.2	17.5
Communications, transportation & public utilities	10.0	4.2
Trade — wholesale & retail	7.0	10.9
Finance, insurance & real estate (FIRE)	29.9	28.8
Services — personal, health, education & Crown corporations	7.2	8.0
Total	100.0	100.0

1 Based upon 568 Canadian companies that underwent restructuring in either 1994 or 1995. The data are derived from the Compact D/Canada CD-ROM.

2 Based upon a total population of 10 099 Canadian companies. The data are derived from the Compact D/Canada CD-ROM.

Table 2
Depth of Restructuring by Industrial Sector, Canada and the United States, 1994–95

Industrial sector	Percentage of firms that underwent restructuring, out of total firms in a given industrial sector	
	Canada	United States
Agriculture, fishery & forestry	6.4	14.3
Metal, oil extraction & non-metallic minerals	3.8	16.8
Construction	2.6	29.6
Manufacturing	8.1	31.0
Communications, transportation & public utilities	13.5	35.7
Trade — wholesale & retail	3.6	30.6
Finance, insurance & real estate (FIRE)	5.8	26.8
Services — personal, health and education	5.1	23.4
Total	5.6	28.4

Source: Data derived from the Compact D/Canada CD-ROM and the Compact D/US CD-ROM.

Note: In Canada, the total number of firms that undertook restructuring is 568, while the total population of Canadian companies is 10 099. In contrast, in the United States, 3 218 firms undertook restructuring out of a total population of 11 347 companies. The U.S. Compact file is limited to firms that have at least US\$5 million in assets and at least 500 shareholders of one class of stock.

Table 3
Distribution of Canadian Companies by Region, 1994–95

Region	Canadian companies that underwent restructuring¹ (%)	All Canadian companies² (%)
Atlantic	2.0	1.5
Quebec	18.8	14.8
Ontario	46.8	35.1
Prairies	20.3	28.4
Pacific	12.1	20.1
Total	100.0	100.0

1 Based on 553 Canadian companies that underwent restructuring in 1994 or 1995. The data are derived from the Compact D/Canada CD-ROM.

2 Based on a total population of 11 936 Canadian companies. The data are derived from the Compact D/Canada CD-ROM.

Reasons, Forms and Goals of Company Restructuring

Reasons for Company Restructuring

Canadian firms have several reasons for initiating restructuring: to meet global competition, to meet domestic competition, to adopt new technologies, to sustain or improve market shares, or to improve stock prices. The sampled Canadian firms were asked to show the relative importance of these reasons for restructuring, ranking them as “not important,” “somewhat important” or “very important.”

Table 4 shows the relative ranking of the various reasons. It indicates that a key reason is sustaining or improving market share. About half of the respondents ranked this as a very important factor in the firm’s decision to undertake restructuring. Two other highly rated factors are meeting domestic competition and meeting global competition. In fact, market share plus domestic and global competition operate individually and interactively to change organizational environments, and thus may lead to restructuring. Rising domestic or global competition may threaten a company’s market share and compel it to redesign its organizational systems and structures.

Firms also redesign in order to improve stock prices. Whenever a company releases a restructuring plan, the price of its stock tends immediately to rise because of better earning prospects. This phenomenon has been observed in almost all cases when companies have announced their decision to restructure. In our survey of Canadian companies, over one third of respondents indicated that improving stock prices was a very important reason for undertaking organizational restructuring.

Among the companies surveyed, adopting new technologies ranked lowest among reasons for initiating restructuring, with only one quarter of respondents considering it very important. The finding is surprising: one would have expected this reason to rank higher. The fact that improving stock prices gets a higher rating than adopting new technologies is still more surprising. The reason for this result is unclear. Perhaps adopting new technologies is both an effect as well as a cause of restructuring in Canadian firms.

Table 4
Relative Importance of Principal Reasons for
Initiating Restructuring in Canadian Companies
 (Percentage of all respondents)

Principal Reasons	Not important	Somewhat important	Very important
Sustain or improve market share	22.6	29.0	48.4
Meet domestic competition	24.2	30.6	45.2
Meet global competition	25.8	32.3	41.9
Improve stock prices	30.5	32.2	37.3
Adopt new technologies	45.2	29.0	25.8

Source: Sample survey of Canadian companies, 1996.

A few companies have indicated, in narrative form, some additional reasons for restructuring, but they have not ranked them in terms of their relative importance. They believe that they have initiated restructuring “to stop losses,” “to eliminate debt,” “to increase ability to raise capital” and “to handle financial difficulties.” However, the importance of these factors in the decision to undertake restructuring appears to be minimal.

Cross-Firm Models of the Reasons for Initiating Restructuring — An Econometric Analysis

While Table 4 describes the observed specific reasons why Canadian firms undertake restructuring, cross-firm models are constructed to identify some general factors that fuel restructuring activity in Canada. The working hypothesis is that the probability of initiating restructuring by a given firm depends upon its growth performance and financial strength. To test this hypothesis empirically, a logit model is employed to generate estimated probabilities of engaging in restructuring, given the company’s growth experience and financial strength.

The firm’s growth experience is represented by the growth rates of total assets and revenues, while its financial position is measured by two financial ratios: (1) the rate of return on capital assets (RR_i) as a measure of profitability, and (2) the debt-equity ratio (DE_i) as an index of leverage. The firm’s size variable is measured by the natural log of sales ($\log_n S_i$). This variable is used as a control variable in the model. The variables are specified as follows:

- DV Dependent variable; this variable equals 1 if the firm undertakes restructuring; otherwise it equals 0.
- GAST Five-year capital asset growth, represented by the average compound rate of growth of total capital assets over the last five years.
- GRV Five-year revenue growth, represented by the compound rate of growth of total revenues over the last five years.

- RR Rate of return, represented by (earnings before extraordinary items, interest expenses and income taxes, multiplied by 100) / (total assets).
- DE Debt-equity ratio, represented by (long-term debt + preferred stock) / (common shareholders' equity).

The logit model employed is as follows:

$$L = \log_n\{(P_i)/(1 - P_i)\} = \beta_0 + \beta_1(\text{GAST}_i) + \beta_2\text{RR}_i + \beta_3\text{DE}_i + \beta_4\log_n S_i + \beta_5(\text{GRV}_i)$$

where L is equal to the log-odds ratio, and $P = 1$ if firm i engages in restructuring and otherwise equals 0.

The data for estimating this model have been obtained from Globe Information Services, the Compact D/Canada Database and the sample survey of Canadian companies (1996) that have undertaken restructuring. A consistent data base was created for 64 Canadian firms, including 37 sampled firms that undertook restructuring and 27 other companies that did not. A priori, GAST, GRV and RR are expected to have negative effects on the probability of engaging in organizational restructuring. Rising GAST, GRV and RR imply that the firm is performing well and is successful in the marketplace. That being so, it does not need to undertake restructuring. On the other hand, a rising DE ratio may prompt a firm to initiate restructuring. Such a firm is highly leveraged, with the result that its creditors and shareholders enjoy a lower level of protection. A rising DE ratio is therefore expected to have a positive effect on the probability of restructuring.

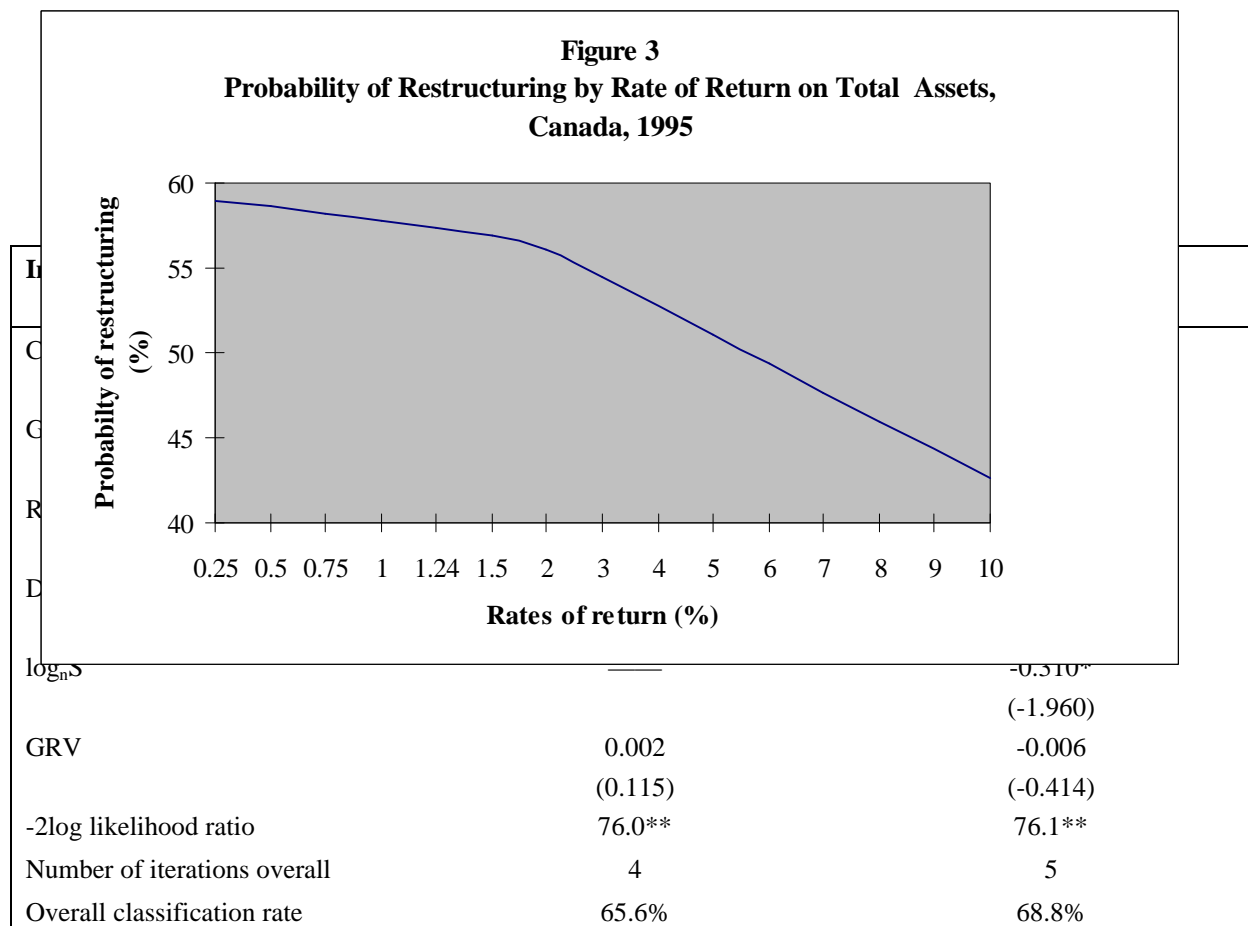
Although we have estimated several versions of our logit model, only two versions are displayed in Table 5. In version 1, the two significant factors that determine engagement in restructuring are asset growth and the rate of return. Both factors have negative effects on the probability of engaging in restructuring. As the rate of asset growth accelerates or the rate of return increases, firms face less pressure to undertake restructuring. The result is a decline in the probability of engaging in restructuring. On the other hand, changes in debt-equity ratios or in revenue growth have no influence on the probability of restructuring in Canadian firms.

The estimated equation for version 1 can be used to calculate the average probability of engaging in restructuring and the changes in restructuring probability when asset growth accelerates or when rates of return vary. By using the coefficients of model 1 and the mean values of statistically significant variables, it was determined that the average probability of initiating restructuring among Canadian companies is 57 percent. Figure 2 displays the decline in restructuring probabilities as asset growth accelerates. For a firm with a five-year asset growth rate of 1 percent, the restructuring probability is high (around 65 percent). In contrast, for a company with an asset growth rate of 10 percent, the restructuring probability is low (about 53 percent).

Similarly, the estimates of restructuring probabilities can be calculated when the rates of return on assets change. Again, based on the coefficients of logit model version 1, Figure 3 shows the changes in restructuring probabilities as rates of return increase. For a company with a rate of return of 0.25 percent on total assets, the restructuring probability is high (about 59 percent). In contrast, for a firm having a rate of return of 10 percent, the restructuring probability declines to 43 percent.

Source: Based on the coefficients of logit model version 1.

Figure 2
Probability of Restructuring by Asset Growth,
Canada, 1995



* Statistically significant at 90-per-cent level of confidence (two-tailed test), at 59 degrees of freedom.

** Statistically significant at 90-per-cent level of confidence (two-tailed test). The log likelihood is distributed χ^2 with 59 degrees of freedom.

Note: The maximum likelihood estimation procedure was used in estimating the logit equations. The SPSS software was employed for logit estimation.

Forms of Company Restructuring

As indicated in the previous section, Canadian companies follow more than one approach in restructuring their organizations. They may use both re-engineering and downsizing or both downsizing and selling portions of their companies to concentrate on core competencies. On average, Canadian firms usually follow two methods of restructuring. Moreover, when they initiate restructuring, companies often seek to avoid words such as “downsizing” or “re-engineering” since they carry negative connotations in the marketplace and are considered synonymous with mass layoffs of workers. Consequently, when most Canadian firms redesign their organizations to respond to changes in the organizational environment, they prefer to use the term “restructuring” in their annual financial statements, rather than “downsizing” or “re-engineering.”

In the survey of Canadian companies, the most common forms of restructuring among sampled firms were re-engineering and downsizing (see Table 6). Around 44 percent of respondents adopted these two methods of restructuring. In fact, both approaches are closely related. When a company re-engineers its production processes, it often improves efficiency and labour productivity. Fewer workers are therefore needed, and the result in turn is downsizing of the organization. Conversely, when a company downsizes, it usually re-engineers its processes and systems to improve their efficiency. Thus re-engineering and downsizing work interactively and play a significant role in restructuring Canadian companies.

It is surprising that TQM is not a very popular method of restructuring among Canadian companies. Only 1 company in 12 used this method for redesigning its organization. One would have expected Canadian firms to make greater use of the approach. The Japanese experience with TQM shows that it is a potent force to improve competitiveness in international markets. Japanese firms have made extensive use of such TQM principles and techniques as JIT, quality circles and customer focus; they have thereby gained substantial competitive advantage and become global market leaders in several product markets. In contrast, Canadian companies prefer re-engineering and downsizing instead of TQM because these methods produce positive results more quickly. TQM necessitates the creation of a culture of continuous improvement. Accordingly, it may take several years before TQM practices have any positive impact on a company's performance.

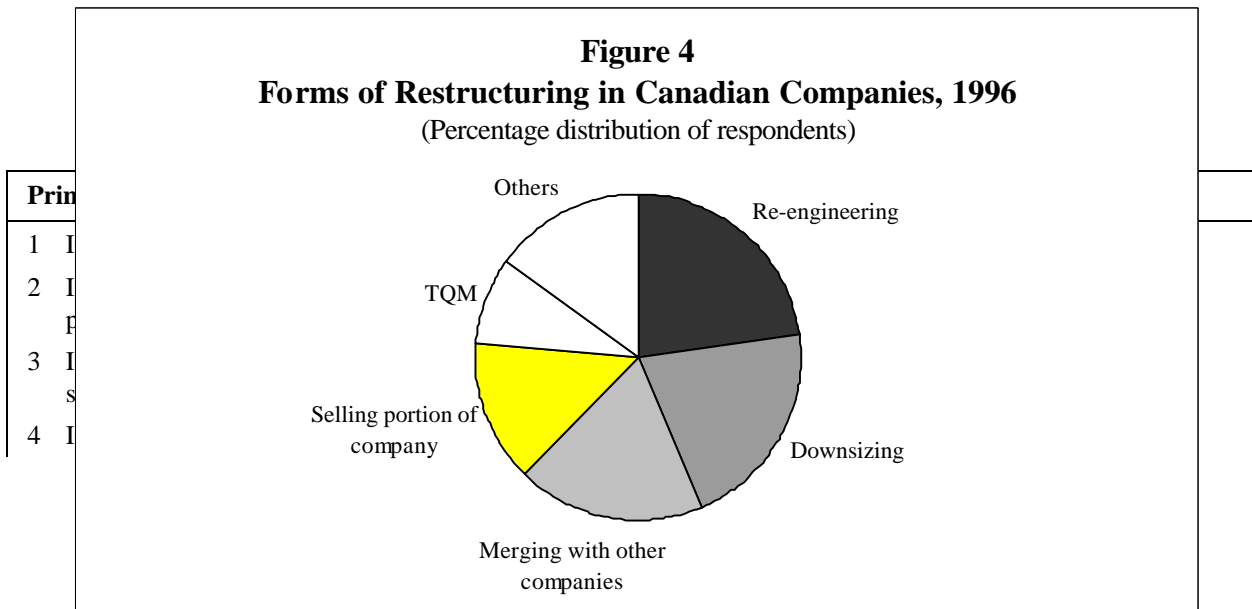
Table 6
Forms of Restructuring in Canadian Companies

Forms of restructuring	Distribution of respondents (%)
1 Re-engineering	22.7
2 Downsizing	21.0
3 Merging with other companies	18.5
4 Selling portion of the company	14.3
5 TQM	8.4
6 Others	15.1
Total	100.0

Source: Sample survey of Canadian companies, 1996.

Source : Sample survey of Canadian companies, 1996.

Figure 4
Forms of Restructuring in Canadian Companies, 1996
(Percentage distribution of respondents)



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5	Increase quality	27.9	29.5	42.6

Source: Sample survey of Canadian companies, 1996.

* Company (real) output per full-time worker.

Goals of Company Restructuring

When companies begin restructuring their organizations, they often set a series of strategic objectives. These may include increasing company profitability, customer satisfaction, product quality and market shares. Companies may pursue all these goals concurrently. However, the relative importance that a firm attaches to each objective varies. Much depends upon a firm's competitive position in the industry in which it operates. In this survey of Canadian companies, respondents were asked to rank the relative importance of the foregoing five goals.

Table 7 shows the relative ranking of these goals. All the goals a company sets for restructuring are interrelated. For instance, increasing quality or increasing customer satisfaction may increase market shares, in turn leading to increased profitability. Almost all the respondents believed that increasing profitability was the key goal pursued through restructuring. Over 98 percent of all respondents considered this goal very important or somewhat important. Three other objectives — increasing productivity, increasing customer satisfaction and increasing market share — were given fairly high, although roughly equal, rating: close to 80 percent of the respondents believed these three objectives were very important or somewhat important.

The finding concerning the objective of improving quality is somewhat surprising: Canadian companies gave the lowest rating to this as a goal of restructuring. Only 43 percent of respondents considered this objective very important, as compared to 87 percent for increasing profitability and around 60 percent for improving productivity. This finding could be attributed to the fact that the Canadian corporate vision is still short-term. Had companies adopted longer-term vision, quality might have received a higher rating. Moreover, this short-term corporate vision may account for the relative lack of popularity among Canadian companies of TQM, a strategy that focuses more on quality.

EFFECTS OF RESTRUCTURING ON COMPANY ORGANIZATIONAL STRUCTURE AND PERFORMANCE

Effects of Restructuring on Company Organizational Structure

As companies redesign their organizations in response to changes in organizational environments, they radically alter their structures, systems, production processes and technologies. As a result, firms usually change their work processes, discontinue some functions and departments, create new functions and departments, and introduce new technologies that require new work skills. These changes in organizational structures are introduced with a view to adapting the organization to changes in its organizational environment, such as an intensification of the need for knowledge-driven innovation or increased market uncertainty, complexity and turbulence. Some management thinkers believe that the current wave of restructuring is creating a new form of corporation, one that is structurally very different from current forms.

The new corporation is believed to be leaner and flatter, resulting in faster work flows within the organization. Further, the new corporation strives to empower workers by radically changing their responsibilities and job skills. In addition, since the new organization concentrates more on core activities, it relies more on the outsourcing of factor inputs.

In the survey of Canadian companies, we sought to learn whether the current wave of business restructuring has altered organizational structures in Canada. Table 8 shows the effects of business restructuring on company structure. The shape of the new organization is leaner and flatter, and the speed of work flows and processes is faster as well. Concurrently, skill requirements for jobs are rising. Approximately one respondent in five believed that corporate restructuring had brought about these effects on the organizational structure of Canadian companies. However, the effects seem to be smaller than one would have expected from the current restructuring wave. Perhaps changing an organizational structure is a gradual process that takes years to complete. Changing structures sometimes require first altering corporate culture or vision, or improving workers' job skills.

**Table 8
Effects of Restructuring on Company Organizational Structure**

Effects on organizational structure	Percentage distribution of respondents
1 Increased speed of work flows	20.1
2 Leaner organization	19.6
3 Flatter organization	19.1
4 Increased skill requirements for jobs	18.1
5 Radical changes in workers' responsibilities	12.3
6 Greater dependence on outsourcing	6.9
7 Others	3.9
Total	100.0

Source: Sample survey of Canadian companies, 1996.

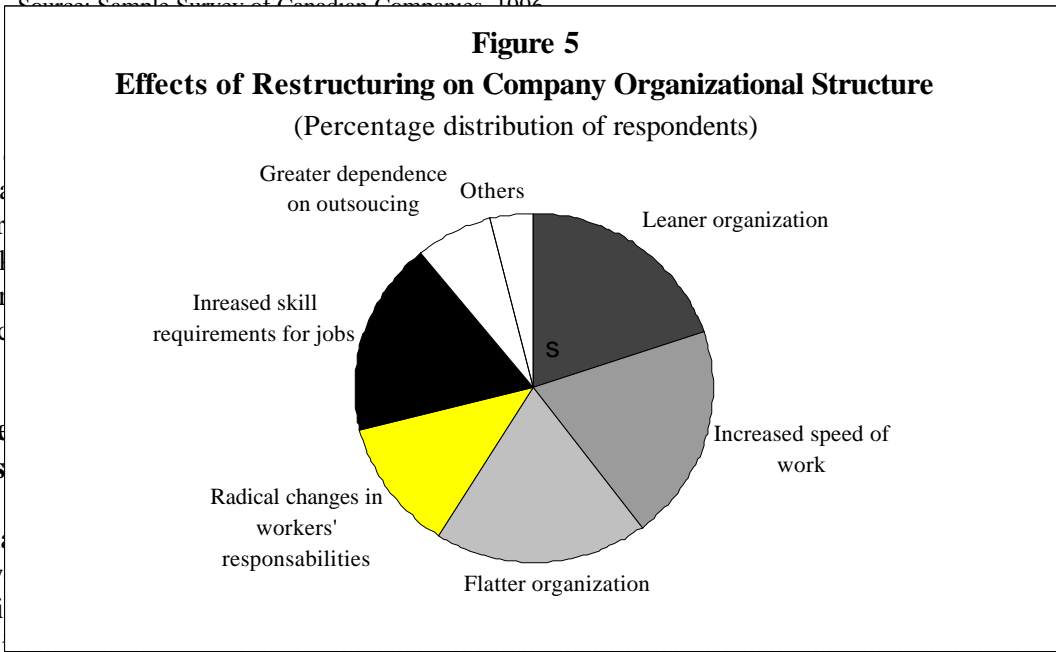
Source: Sample Survey of Canadian Companies, 1996

Figure 5
Effects of Restructuring on Company Organizational Structure
 (Percentage distribution of respondents)

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restructuring. Further, there is a general perception that restructuring always leads to a reduction of company employment. In fact, this is not exactly true. Our survey results show that about 56 percent of respondents experienced either an increase or no change in their company employment, as compared to 44 percent who indicated that employment levels had declined.

Table 9
Effects of Restructuring on Company Costs, Revenues, Productivity and Employment
 (Percentage distribution of all respondents)

Effects	Costs	Revenues	Productivity*	Employment
Decrease	60.7	8.6	1.7	43.6
Increase	14.7	62.1	83.3	29.0
No change	24.6	29.3	15.0	27.4
Total	100.0	100.0	100.0	100.0

Source: Sample survey of Canadian companies, 1996.

* Real output per full-time worker.

Table 10
Estimated Quantitative Effects of Restructuring on Company Costs, Revenues, Productivity and Employment
 (Average percentage change)

Effects	% Change in costs	% Change in revenues	% Change in productivity	% Change in employment
Responding companies with negative effects	24	40	n.a.*	31
Responding companies with positive effects	n.a.*	73	35	80

Source: Sample survey of Canadian companies, 1996.

* Not available. Sample size is too small to give these estimates.

We asked companies to provide estimated quantitative effects of restructuring on costs, revenues, productivity and employment. The estimates supplied by the responding companies appear to be rough figures. However, one fact stands out: on average, restructuring has created relatively more jobs than it has eliminated. This fact is contrary to the popular view that restructuring always results in the elimination of jobs. It is true that restructuring has led to “churning” in the labour market and to the layoff of numerous workers whose skills and occupations are no longer in demand. On the other hand, restructuring has created many new jobs and occupations. As a result of restructuring, employment has risen by 80 percent in companies with positive employment effects, as compared to a 31-per-cent employment decline in companies with negative employment effects (see Table 10).

Cross-Firm Models for Estimating the Immediate Effects of Restructuring on a Company's Profitability

The foregoing data about the impact of restructuring seems to capture the *long-term* effects of restructuring on a company's costs and revenues. The data were obtained from the sample survey of Canadian companies (1996). Cross-firm models are designed to determine the *immediate* effects of restructuring on a firm's profitability. The working hypothesis is that restructuring immediately increases the company's profitability, after the influence of its size ($\log_n S_i$) and short-term financial performance is controlled. The

firm's profitability is measured by two financial ratios: net profit margin (NPM) and net operating margin (NOM). The company's size is measured by the natural log of sales ($\log S$), while financial position is measured by two ratios: the operating expense ratio (OER) and the current ratio (CR). $\log_n S$, OER and CR are used as control variables in the regression analysis. These variables are specified as follows:

- DV Dependent Variable: NPM and NOM.
- NPM The net profit margin ratio equals net income available to common shares, divided by revenue. This ratio shows how well the firm is managed, after taking into account expenses and taxes.
- NOM The net operating margin ratio is equal to net sales less cost of goods sold and operating expenses, divided by sales. This financial ratio reflects profitability before taxes and interest payments.
- OER The operating expense ratio is equal to operating expenses divided by net sales. The ratio reflects management's ability to control expenses.
- CR The current ratio equals current assets divided by current liabilities. It indicates the firm's ability to meet its short-term financial obligations with short-term assets.
- DY This equals 1 if the company undertakes restructuring; otherwise it equals 0.

The linear regression model employed is as follows:

$$DV_i = \beta_0 + \beta_1(DY_i) + \beta_2OER_i + \beta_3CR_i + \beta_4\log_n S_i + \epsilon_i$$

The data for estimating the regression model have been obtained from Globe Information Services, the Compact D/Canada Database and the sample survey of Canadian companies (1996) that have undertaken restructuring. A consistent data base was created for 64 Canadian firms, including 37 sampled firms that undertook restructuring and 27 other companies that did not. Estimated linear regression equations are displayed in Table 11. Model 1 is estimated by using NPM as a dependent variable, while model 2 uses NOM as a dependent variable.

Both estimated models, which are statistically robust, show very similar results. In both models, the restructuring variable, DY, shows a statistically insignificant effect on the company's profitability. The negative sign of the coefficient of DY, although not statistically significant, is indeed surprising. The results from both models indicate that the company's size ($\log_n S$) and the operating expense ratio (OER) drive its profitability ratio in the short run.

Canadian companies are very concerned about the negative psychological effects that layoffs may have on workers who lose their jobs as well on those who keep their jobs but whose motivation and loyalty may decline. Accordingly, companies surveyed provided a number of services to laid-off employees, including buy-out options for older workers, job search assistance for younger workers, training funds and counselling services. While implementing restructuring plans, close to half of the companies have involved workers' representatives in the restructuring process.

Table 11
Estimated Effect of Restructuring on a Company's Profitability, Canada
 (Coefficients with *t*-statistics in parentheses)

Independent variable	Linear regression model 1 Dependent variable: NPM	Linear regression model 2 Dependent variable: NOM
Constant	45.17* (3.53)	44.96* (3.59)
DY	-6.70 (-1.23)	-6.57 (-1.24)
Log _n S	4.31* (3.10)	4.78* (3.51)
OER	-0.89* (-10.75)	-0.88* (-10.92)
CR	0.73 (1.27)	0.70 (1.25)
Adjusted R squared (Adjusted R ²)	0.77	0.78
Standard errors	21.2	20.7
Degrees of freedom	59	59
D.W. statistics	2.3	2.1

* Statistically significant at 90-per-cent level of confidence (two-tailed test), with 59 degrees of freedom.

Note: The SPSS multiple linear analysis procedure was used in estimating the regression equations.

Table 12
Benefit services provided by Canadian companies to laid-off workers

Nature of benefits provided to laid-off workers	Percentage distribution of respondents
1 Buy-out options to older workers	27.5
2 Job search assistance to younger workers	27.4
3 Counselling services	24.5
4 Funding for training	14.7
5 Other	5.9
Total	100.0

Source: Sample survey of Canadian companies, 1996.

The firms sampled offered more than one service to laid-off workers. They provided job search assistance to younger workers, counselling services and funding for training. They also provided buy-out options to older workers so that they could retire earlier. Around one quarter of the respondents indicated that buy-out options, job search assistance and counselling services were provided (Table 12). The firms sampled were least likely to provide funding for training to laid-off employees. Only one company in seven provided funds for training. Many companies find training costly to buy, and wish to focus their efforts on retraining or upgrading employees who remain in their jobs rather than on those who are laid

Table 13
Relative Importance of Reasons for Canadian Companies' Success in Restructuring
 (Percentage of all respondents)

Reasons	Not important	Somewhat important	Very important
1 Senior management open in describing goals of restructuring	5.2	18.9	75.9
2 Restructuring carefully planned to avoid work flow bottlenecks	11.1	27.8	61.1
3 Increased customer satisfaction	16.7	29.6	53.7
4 Increased product quality	17.3	36.5	46.2
5 Workers actively involved in restructuring	29.6	33.3	37.1
6 Extensive investment in new technologies	31.6	36.8	31.6
7 Provided training to workers	26.9	44.2	28.8

Source: Sample survey of Canadian companies, 1996.

off or take early retirement. In addition, training is provided for by federal and provincial training programs.

The survey also sought to learn whether companies felt that their restructuring efforts had been successful or not. Although some companies had experienced declines in revenues or increases in costs as a result of restructuring, all sampled companies considered their corporate restructuring to be successful. We are indeed puzzled by this result. Perhaps companies believe that declines in revenues and increases in costs are only short-term phenomena, and that restructuring will improve performance in the long run.

Further, we asked respondents to identify the reasons for the success of corporate restructuring and to rank the reasons according to their importance. Firms gave several reasons for the success of their corporate restructuring (see Table 13). The three reasons most frequently ranked as very important were the following: (1) senior management had been open in describing the goals of restructuring; (2) restructuring had been carefully planned to avoid work flow bottlenecks; and (3) customer satisfaction had increased. Also ranked highly were increased product quality and the active involvement of workers in restructuring. Canadian firms accorded less importance to reasons such as extensive investment in new technologies and training for workers. Again, these findings are surprising because the lowest-ranked reasons are often considered crucial factors in improving company performance in the management literature.

CONCLUDING REMARKS AND POLICY IMPLICATIONS

At present, Canadian companies are in the midst of massive restructuring. Increases in available knowledge and growing uncertainty, resulting from greater global competition and rapid technological change, are root causes of change in organizational environments. These two energizing forces — knowledge and uncertainty — act individually and interactively to bring about organizational changes. The tempo of these changes is markedly speeding up. Knowledge is a crucial factor and plays a double role in restructuring: it not only causes organizational change but also plays a vital role in the organizational restructuring process. Knowledge has thus become more powerful, more valuable than firm size and access to natural resources. Success now goes to companies that acquire and manage knowledge most effectively.

Three restructuring approaches are most popular in North America: (1) downsizing and focussing on core competencies, (2) re-engineering and (3) total quality management (TQM). Many companies have achieved substantial improvements in costs, lead times, quality and customer service by using these approaches. Downsizing and re-engineering are more commonly used than TQM among Canadian companies. It is important to note that these methods are different and cannot be applied in all situations. However, firms usually select some elements from each method and then prepare a new restructuring mixture that is most appropriate to their situations.

The present wave of restructuring in Canadian business is unique and unprecedented in two respects. First, it has hit the labour-intensive services sector harder; second, it has displaced more white-collar workers such as middle managers, professionals and technicians. These workers are relatively more concentrated in the services sector. More than half of the firms that have undergone restructuring in recent years belong to the services sector, including trade, financial, educational, health and community services, as well as transportation, communications and public utilities. In contrast, only one quarter of the companies that have restructured belong to the manufacturing sector, although restructuring is relatively deeper in the manufacturing sector. While 18 percent of all Canadian companies are involved in manufacturing, the share of manufacturing companies that have undergone restructuring is 25 percent. This experience is similar to that of the United States, although the American manufacturing sector is relatively more affected by the current wave of restructuring.

Within the services sector, the finance, insurance and real estate (FIRE) industries have experienced wider restructuring. Over half of the firms that have restructured in this sector come from the FIRE group of industries. This outcome is due mainly to the impact of information technology and to the deregulation of financial institutions in Canada. In contrast, within the manufacturing sector, most of the companies that have restructured belong to such heavy industries as the machinery and equipment, fabricated metal, electronic and electrical equipment, and transportation equipment. This result can be attributed to the introduction of computers, numerically controlled machines and robotics technologies. Again within manufacturing, fewer firms that have undergone restructuring belong to light manufacturing industries, such as food products, textiles and apparel, and paper and paper products.

Restructuring is substantially less deep in Canada than in the United States, a phenomenon observed across all industrial sectors. For example, the relative restructuring frequency for the Canadian manufacturing sector is only 8 percent, whereas the comparable frequency ratio for the American manufacturing sector is 31 percent. The current rising productivity level gap between Canadian and American manufacturing could be attributed to much greater restructuring in the United States than in Canada.

Services and manufacturing sectors are relatively more affected by the current restructuring phase. Since these industries are predominantly concentrated in central Canada, the burden of restructuring has

fallen relatively more heavily on companies located in Ontario and Quebec. About two thirds of the firms that have undergone restructuring are situated in these two provinces.

Canadian firms restructure their organizations to meet global competition, to meet domestic competition, to adopt new technologies, to sustain or improve market share, or to improve stock prices. Sustaining or improving market share is a key reason for initiating restructuring. About half of respondents considered this the most important factor in the firm's decision to undertake restructuring. Two other reasons rated very highly by respondents were meeting domestic competition and meeting global competition. All three reasons individually and interactively change organizational environments and thereby lead to company restructuring. Rising domestic or global competition may threaten a company's market share and compel it to redesign its organizational systems and structures.

Cross-firm econometric models are constructed to identify some general factors that fuel restructuring activity by Canadian firms. The two significant factors that determine engagement in restructuring are asset growth and the rate of return. Both factors have negative effects on the probability of engaging in restructuring. As the rate of asset growth accelerates or the rate of return increases, firms face less pressure to undertake restructuring. The result is that the probability of engaging in restructuring declines. On the other hand, revenue growth has no significant influence on the probability of restructuring among Canadian firms.

A firm often sets a series of strategic objectives when it begins restructuring its organization. These may include increasing company profitability, customer satisfaction, product quality and market shares. Companies may pursue all these goals concurrently. The relative importance a firm attaches to each objective varies. In this study, the sampled companies were asked to rank the relative importance of the foregoing five goals. Almost all companies believed that increasing profitability was the key goal the company pursued in restructuring its organization. Over 98 percent of all respondents considered this goal to be either very important or somewhat important. Three other objectives were given a fairly high rating: increasing productivity, increasing customer satisfaction and increasing market share.

The current wave of business restructuring has altered the organizational structure in Canada. The shape of the new organization is leaner and flatter, and the speed of work flows and processes is faster as well. Concurrently, skill requirements for jobs are rising.

Canadian firms are very optimistic about the results of restructuring. The majority of companies believed that restructuring had increased revenues and productivity, and reduced costs. There is a general perception that restructuring always results in a reduction of company employment. In fact, this is not exactly true. The results of this survey suggest that, on average, restructuring has created relatively more jobs than it has eliminated. This finding is contrary to the popular view that restructuring always eliminates jobs. It is true that restructuring has led to "churning" in the labour market, and that many workers have been displaced because certain skills and occupations are no longer in demand. On the other hand, restructuring has created numerous new jobs and occupations.

The study also asked companies whether their restructuring efforts have been successful or not. Although some companies had experienced declines in revenues or increases in costs as a result of restructuring, all sampled companies considered that corporate restructuring had been successful. They indicated three reasons for the success: (1) senior management had been open in describing the goals of restructuring; (2) restructuring had been carefully planned to avoid work flow bottlenecks; and (3) customer satisfaction had increased. Also ranked highly were increased product quality and active involvement of workers in restructuring. On the other hand, Canadian firms accorded less importance to reasons such as extensive investment in new technologies and the provision of training for workers. These results are surprising because the lowest-ranked reasons are often considered critical factors for improving company performance in the management literature.

As we indicated earlier, most firms believed that restructuring had increased their revenues and productivity, and reduced costs. However, these outcomes seem to be long-term effects. Cross-firm econometric models are designed to determine the immediate effects of restructuring on a firm's profitability performance. The results from these models show that restructuring has a statistically insignificant effect on a company's profitability in the short run. Instead, the company's size and the operating expense ratio drive its profitability ratio in the short term.

Companies were also asked whether they had sought assistance from government programs while implementing their restructuring plans. Most restructuring is carried out by companies themselves, without government assistance. Only one company in six indicated that it had used government assistance in its restructuring process. Companies have often used federal and provincial training programs, with the objective of assisting workers adversely affected by the restructuring process.

The tempo of restructuring is determined principally by the speed with which the organizational environment is changing. Governments can certainly play an important role in assisting companies to restructure smoothly in the face of the pressures these changes entail. Companies often face a difficult task in diagnosing and interpreting changes in the organizational environment before they initiate restructuring. Governments can make this process easier for companies if, on an ongoing basis, they collect and diffuse information on general market, industry and technology trends.

APPENDIX A
NAMES OF CANADIAN COMPANIES SURVEYED

Air Canada	Quebec
Alberta Energy Company Ltd.	Alberta
Algoma Steel Inc.	Ontario
Applied Carbon Technology, Inc.	Quebec
Avenor Inc.	Quebec
Bank of Nova Scotia	Nova Scotia / PEI
BC Gas Inc.	British Columbia
BC Tel	British Columbia
Biomira Inc.	Alberta
Bonar Inc.	Ontario
Brascan Limited	Ontario
Brunswick Mining and Smelting Corporation Limited	Ontario
Cable & Wireless Canada Inc.	Ontario
Campbell Resources Inc.	Ontario
Canada Post Corp.	Ontario
Canadian Jorex Limited	Alberta
Canadian National Railway Company	Quebec
Canadian Pacific Limited	Quebec
Canadian Pioneer Energy Inc.	Alberta
Canadian Utilities Limited	Alberta
Circuit World Corporation	Ontario
Coca-Cola Beverages Ltd.	Ontario
Cognos Incorporated	Ontario
Commstar Ltd.	Ontario
Consoltex Group Inc.	Quebec
Custom Cryogenic Grinding Corporation	Ontario
Develcon Electronics Ltd.	Saskatchewan
Disys Corporation	Ontario
Dofasco Inc.	Ontario
Donohue Inc.	Quebec
Electrohome Limited	Ontario
Fleet Aerospace Corporation	Ontario
Ford Motor Company of Canada, Limited	Ontario

Four Seasons Hotels Inc.	Ontario
Gandalf Technologies Inc.	Ontario
Guillevin International Inc.	Quebec
Hawker Siddeley Canada Inc.	Ontario
High River Gold Mines Ltd.	Ontario
Home Oil Company Limited	Alberta
Hudson's Bay Company	Ontario
Hydro-Québec	Quebec
Inmet Mining Corporation	Ontario
International Forest Products Limited	British Columbia
IPL Energy Inc.	Alberta
IPL Inc.	Quebec
Journey's End Corporation	Ontario
Laidlaw Inc.	Ontario
Maritime Telegraph and Telephone Company, Limited	Nova Scotia / PEI
MDS Health Group Limited	Ontario
Microbix Biosystems Inc.	Ontario
Mitel Corporation	Ontario
Molson Companies Limited	Ontario
National Sea Products Limited	Nova Scotia / PEI
Noranda Forest Inc.	Ontario
Petro-Canada	Alberta
Plastibec Ltée	Quebec
QSR Limited	Ontario
Saskatchewan Power Corporation	Saskatchewan
Sears Canada Inc.	Ontario
Shell Canada Limited	Alberta
Stone-Consolidated Corporation	Quebec
Via Rail Canada Inc.	Quebec
Vidatron Group Inc.	British Columbia

**APPENDIX B
QUESTIONNAIRE**

I. Company Profile

Q1: What are the major products and/or services of your company?

Q2: What were your company's total global sales in 1994?
(Please check the appropriate circle.)

- less than \$1 million
- \$1–10 million
- \$11–50 million
- \$51–100 million
- greater than \$100 million

Q3: What is the total number of workers employed in your company? _____

Q4: What proportion of your sales is in foreign markets? _____ %

Q5: (a) Is your company controlled by a parent company?

- Yes (go to Q5b)
- No (go to Q6)

(b) Please indicate the location of your parent company.
(Check the appropriate circle.)

- Canada
- U.S.A.
- U.K.
- Japan
- Germany
- France
- Other (please describe)

Q6: What is the form of restructuring your company has been involved in since 1990?

- Re-engineering
- Downsizing
- Total Quality Management (TQM)
- Automation
- Other form (please describe)

Q7: What are the principal reasons why your company initiated restructuring? (Please circle the appropriate number. On a scale of 1 to 5, 1 is not important and 5 is most important.)

- | | Not important | | | | | Very important |
|--|---------------|---|---|---|---|----------------|
| | 1 | 2 | 3 | 4 | 5 | |
| <input type="radio"/> To meet global competition | 1 | 2 | 3 | 4 | 5 | |
| <input type="radio"/> To meet domestic competition | 1 | 2 | 3 | 4 | 5 | |
| <input type="radio"/> To adopt new technologies | 1 | 2 | 3 | 4 | 5 | |
| <input type="radio"/> To sustain or improve market share | 1 | 2 | 3 | 4 | 5 | |
| <input type="radio"/> To improve stock prices | 1 | 2 | 3 | 4 | 5 | |

Q8: What were the principal goals of your company's restructuring?

- | | Not important | | | | | Very important |
|--|---------------|---|---|---|---|----------------|
| | 1 | 2 | 3 | 4 | 5 | |
| <input type="radio"/> Increase profitability | 1 | 2 | 3 | 4 | 5 | |
| <input type="radio"/> Increase customer satisfaction | 1 | 2 | 3 | 4 | 5 | |
| <input type="radio"/> Increase productivity | 1 | 2 | 3 | 4 | 5 | |
| <input type="radio"/> Increase quality | 1 | 2 | 3 | 4 | 5 | |
| <input type="radio"/> Increase market share | 1 | 2 | 3 | 4 | 5 | |
| <input type="radio"/> Other reasons | 1 | 2 | 3 | 4 | 5 | |

Q9: How long did it take to complete your company's restructuring? (Please check the appropriate circle.)

- less than 6 months
- 6 to 12 months
- 13 to 24 months
- 25 months and over

Q10: Please describe briefly your company's restructuring process.

Q11: What were the effects of restructuring on company revenues, costs, productivity, employment and exports? (Please check the appropriate circle.)

(a) Revenues

- Increase Estimated amount _____ %
 Decrease Estimated amount _____ %
 No change

(b) Costs

- Increase Estimated amount _____ %
 Decrease Estimated amount _____ %
 No change

(c) Productivity (change in company output for full-time worker)

- Increase Estimated amount _____ %
 Decrease Estimated amount _____ %
 No change

(d) Employment

- Increase Estimated amount _____ %
 Decrease Estimated amount _____ %
 No change

(e) Exports

- Increase Estimated amount _____ %
 Decrease Estimated amount _____ %
 No change

Q12: Did your company involve workers' representatives in the restructuring process?

- Yes No

Q13: While implementing restructuring, did your company increase investment in new technology/equipment?

- Yes No

Q14: Has your company introduced any of the following kinds of organizational changes in recent years?

- The company has become leaner.
 The speed of work flows in the organization has increased.
 The organizational structure has become flatter.
 Radical changes in workers' responsibilities.
 Skill requirements for jobs have increased.
 There is now greater dependence on outsourcing.

Q15: How many workers have left the company as a result of restructuring? _____ (#)

Q16: Did your company provide some benefit service to laid-off workers?
(Please check the appropriate circle. You may choose more than one.)

- | | Not important | | | | Very important |
|---|---------------|---|---|---|----------------|
| | 1 | 2 | 3 | 4 | 5 |
| <input type="radio"/> Provided buy-out option to older workers. | | | | | |
| <input type="radio"/> Provided job search assistance to younger workers | | | | | |
| <input type="radio"/> Provided funding for retraining. | | | | | |
| <input type="radio"/> Provided counselling services. | | | | | |
| <input type="radio"/> There were no layoffs. | | | | | |

Q17: Do you consider your company's restructuring a success or a failure?

- Success Failure

Q18: How would you rate the following reasons why your company's restructuring has succeeded?
(Please circle the appropriate number. On a scale of 1 to 5, 1 is not important and 5 is most important.)

- | | Not important | | | | Very important |
|---|---------------|---|---|---|----------------|
| | 1 | 2 | 3 | 4 | 5 |
| <input type="radio"/> Workers were actively involved in restructuring. | | | | | |
| <input type="radio"/> Large investments in new technologies. | | | | | |
| <input type="radio"/> Senior management was open in describing the goals of restructuring. | | | | | |
| <input type="radio"/> Restructuring was carefully planned to avoid work flow bottlenecks in the organization. | | | | | |
| <input type="radio"/> Provided retraining to workers. | | | | | |
| <input type="radio"/> Customer satisfaction increased. | | | | | |
| <input type="radio"/> Product quality increased. | | | | | |
| <input type="radio"/> Other reasons (please specify) | | | | | |

Q19: How would you rate the following reasons why your restructuring has failed?
(Please circle the appropriate reasons.)

	Not important			Very important	
	1	2	3	4	5
<input type="radio"/> Workers did not co-operate in restructuring.	1	2	3	4	5
<input type="radio"/> No benefit services were provided to laid-off workers.	1	2	3	4	5
<input type="radio"/> No retraining was provided to workers.	1	2	3	4	5
<input type="radio"/> Skill shortages developed.	1	2	3	4	5
<input type="radio"/> Senior management was not open in describing its restructuring goals.	1	2	3	4	5
<input type="radio"/> Did not invest in new technologies.	1	2	3	4	5
<input type="radio"/> Work flow bottlenecks developed as a result of restructuring.	1	2	3	4	5
<input type="radio"/> Customer satisfaction decreased.	1	2	3	4	5
<input type="radio"/> Product quality decreased.	1	2	3	4	5
<input type="radio"/> Others (please specify)	1	2	3	4	5

Q20: While implementing restructuring, did your company seek assistance from government programs?
(Please check the appropriate circle.)

- Yes No

If yes, please indicate the name of the program.

Thank you very much.

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