WORKING PAPER

WORLD MANDATE STRATEGIES

FOR CANADIAN SUBSIDIARIES

Working Paper Number 9
March 1996

Industry Canada Industrie Canada

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Working Paper Number 9
March 1996

Aussi disponible en français

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EXECUTIVE SUMMARY

This paper identifies the factors associated with world mandates in Canada's foreign-owned subsidiary companies. It examines the processes of mandate gain and the relationship of mandates to various aspects of subsidiary performance.

There are three key findings.

- The subsidiary's internal attributes and, most critically, its upstream capabilities, i.e., research and development (R&D) and manufacturing, are the key predictors of world mandate success.

- Mandates are gained through two types of subsidiary initiatives: internal and external. Internal initiatives are associated with tight integration and an entrepreneurial subsidiary culture. External initiatives are associated with high autonomy, R&D capabilities and strong leadership.

- Mandate presence is related to subsidiary performance through "subsidiary value-added" which is a qualitative measure of the subsidiary's contribution to the corporation.

Findings have implications for public policy.

- Mandate success is driven from within the subsidiary rather than by the nature of the parent–subsidiary relationship. This conclusion points to the importance of nurturing an entrepreneurially minded business culture in Canada's foreign-owned industrial sector.

- Mandate subsidiaries seem to occur in industries with a relatively *low* level of Canadian competition, a result which was not expected. The suggestion from this finding is that Canadian subsidiaries are better at gaining "niche" mandates, in relatively uncompetitive industries, than gaining "leading-edge mandates" in those industries in which Canada has a stronger presence.

1. INTRODUCTION

This paper examines the international responsibilities, or mandates,[1] of foreign-owned subsidiaries in Canada. While the primary focus is on the factors associated with mandate formation, the impact of mandates on subsidiary performance is also examined. The paper is built on two key premises.

- Mandates are critical to the long-term growth of foreign-owned subsidiaries.
- Mandates are primarily earned by a subsidiary through the initiative of its managers.

The former assumption has been central to much of the strategic management and public policy literature on subsidiary management (e.g., Etemad and Séguin-Dulude, 1986; Rugman and Bennett, 1982; Science Council of Canada, 1980), and its implications have been explored. In contrast, the latter assumption has been frequently mentioned (e.g., Crookell, 1986; Crookell and Morrison, 1990; McGuinness and Conway, 1986) but never studied in depth.

This project represents the third phase of a research program on the entrepreneurial process that fosters the attainment of mandates in foreign-owned Canadian subsidiaries (Birkinshaw, 1995a; 1995b). Phase one was exploratory and documented the existence of an entrepreneurial phenomenon in the context of the changing role of the national subsidiary in Canada. Phase two took an in-depth look at the entrepreneurial process in six Canadian subsidiaries. It concluded that four distinct types of initiatives[2] could be identified — all focused on achieving mandates for the subsidiary but through very different processes. In phase three (i.e., the current project), the entire population of medium-to-large Canadian subsidiaries is considered. It takes a much broader perspective and looks at the factors influencing the presence or absence of mandates in Canadian subsidiaries. In other words, why have some subsidiaries gained mandates while others have not? The role of subsidiary initiative as an antecedent to mandates is carefully considered as well.

The next section outlines previous literature on mandates and subsidiary entrepreneurship. Following this, the theoretical model is put forward and the research propositions described. The research methodology is then outlined, both with regard to sampling procedures and measurement issues. Finally, the findings from the study and the implications of those findings are discussed.

2. LITERATURE REVIEW

While mandates have been used for many years, they only received widespread recognition at the beginning of the 1980s, when a Science Council of Canada (1980) report called them "[a]n interesting and useful instrument for dealing with the problems posed by a branch plant manufacturing sector." The report went on to describe four Canadian subsidiaries that had met with considerable success in winning mandates. A substantial body of research subsequently emerged, from both strategic management and public policy perspectives (e.g., Bishop and Crookell, 1986; Crookell, 1990; Crookell and Caliendo, 1980; Etemad and Séguin-Dulude, 1986; Poynter and Rugman, 1982; Rugman and Bennett, 1982).

Widespread agreement that mandates were desirable was, however, coloured by a perception that multinational corporation (MNC) parent companies would be reluctant to cede control of strategically important activities to subsidiary companies (Crookell, 1986; Poynter and Rugman, 1982). There were also concerns voiced regarding the competitiveness of a mandate on a sustainable basis (D'Cruz, 1986) and the merits of government actively supporting mandate subsidiaries at the expense of other industrial sectors (Johnston, 1982). Notwithstanding these concerns, mandates became an important feature of the foreign-owned industrial sector in Canada, particularly in light of free trade with the United States (Crookell and Morrison, 1990).

Mandate strategy research has not been restricted to Canada. The concept has received explicit attention in Europe (Forsgren and Johansen, 1992; Young, Hood and Dunlop, 1988) and is at the centre of much recent research on the network conceptualization of the MNC (Ghoshal and Bartlett, 1991).

It has been observed that full-scope mandates, in which the subsidiary is responsible for development, manufacturing *and* marketing, are relatively rare. Because many mandates are constrained both geographically and by function, some researchers opt for more generic terms such as specialized mission (Ontario Ministry for Trade and Tourism, 1980) or international responsibilities (Moore, 1993). The preference in this study is to use the generic term "mandate" with the understanding that sub-types, such as world product mandate or regional manufacturing mandate, can also be identified. This terminology is also consistent with managerial usage.[3]

Regardless of scope, the primary outcome of the mandate process for the subsidiary is greater specialization, in terms of a focused factory or product responsibility. Full-scope mandates also offer the subsidiary greater autonomy (the right to make strategic decisions without parent company intervention). But, as observed by D'Cruz (1986), manufacturing mandates actually lead to a lower level of autonomy than that held by Canada-focused operations, e.g., Canadian auto plants. A second key point is the recognition that mandates are earned not given (Bishop and Crookell, 1986). Though exceptions exist, the responsibility for identifying the mandate opportunity and pursuing it rests wholly with the subsidiary, because most MNCs are reluctant to yield control of strategic activities to subsidiaries.

Working from the premise that most mandates are earned not given, the broad objective of most studies has been to identify the key success factors associated with the attainment of mandates (e.g., Bishop and Crookell, 1986; Moore, 1994; Roth and Morrison, 1992; Science Council of Canada, 1980). One approach has been to survey a relatively large number of subsidiaries to extract the common features. Moore (1994) represents the most recent example of this, with a list of success factors emerging from his work:

- presence of mandate champions;
- subsidiary competence;
- early-or late-product life cycle products;
- previous export experience;
- niche capability;
- flexibility;
- strong relationships with headquarters and other subsidiaries; and
- government support.

A second approach has been to focus on a small number of in-depth case studies in order to understand the causal relationships between factors. The Science Council of Canada (1980) study was definitive in this regard, with its descriptions of Westinghouse Canada, Litton Industries, Black and Decker Canada and Garrett Manufacturing. The 1980 study has been re-interpreted by a number of academics (e.g., McGuinness and Conway, 1986; Pearce, 1992; Rugman and Bennett, 1982).

Working, again, from the premise that mandates are earned not won, the second phase of the current research program (Birkinshaw, 1995b) identified four distinct processes (i.e., initiatives) that led to the attainment of world mandates:

- the reconfiguration of existing activities;
- a new business in Canada that is subsequently developed worldwide;
- a bid for a planned corporate investment; and
- enhancement of an existing mandate.

This was an important development because it showed that key success factors vary according to the process. There is, in other words, neither a generic "mandate-winning" process nor a generic set of key success factors.

The major limitation of this prior study, however, was its focus on subsidiaries that had been mostly successful. This bias was necessary to ensure that the phenomenon was comprehensively researched, but it underscored the need to examine the broader population of Canadian subsidiaries, particularly those that have never pursued initiatives. This broader survey is the thrust of the current study. It should be observed that the insights from the previous study made it possible to undertake a cross-sectional survey with greater precision than was previously possible, because the various mandate-winning processes are now more fully understood.

3. CONCEPTUAL FRAMEWORK

The dependent variable in this study is the presence or absence of subsidiary mandates. In other words, we are interested in understanding those factors that help to predict whether a subsidiary has mandate responsibilities or not. Unfortunately, a simple yes or no to the question "does your subsidiary have any international responsibilities or mandates" conceals more than it reveals, because mandates vary so much in quality and scope. There is no single measure that captures the complexity of the subsidiary's responsibilities so a variety of measures were used, as discussed below. Furthermore, subsidiary mandates are not an end in themselves, because they can be poorly managed or well-managed. Therefore, both the antecedents to and consequences of subsidiary mandates are included in the conceptual framework.

Antecedents to a Subsidiary Mandate

It is proposed that subsidiary mandates are gained through three sets of factors:

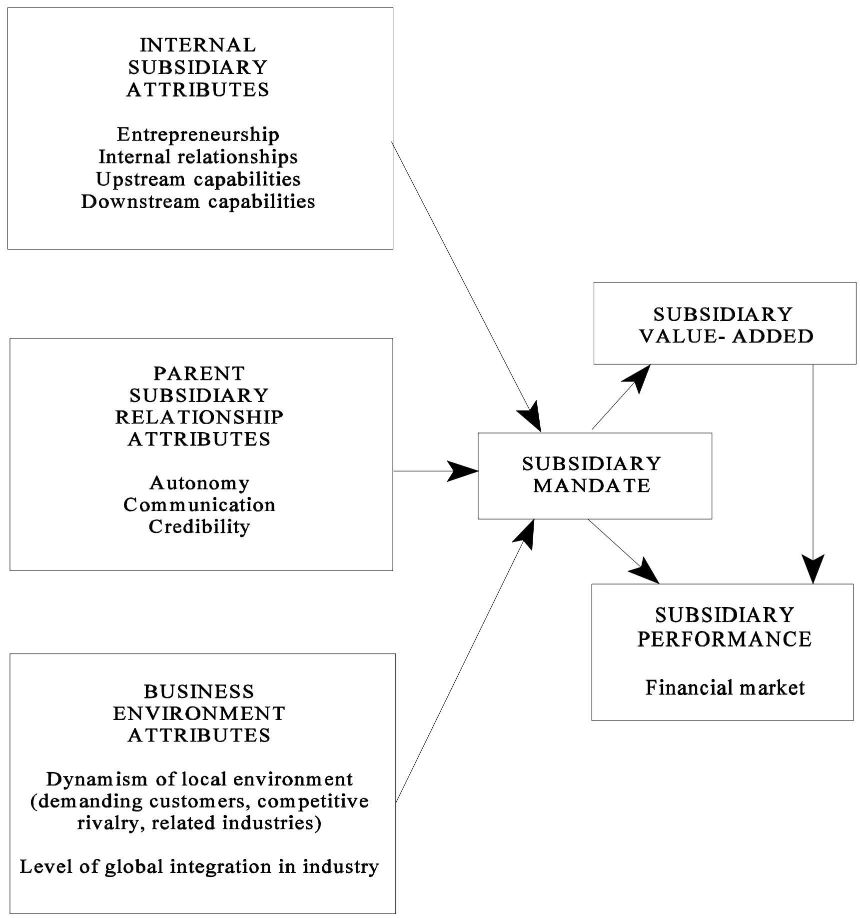
- internal subsidiary attributes;
- aspects of the parent–subsidiary relationship; and
- the business environment.

The traditional approach to subsidiary management is exemplified by the process school (Bartlett, 1979; Bower, 1970; Burgelman, 1983; Prahalad, 1976). It conceptualized a structural context for the subsidiary which consisted of the various facets of its relationship with the parent company. The subsidiary was controlled, through the imposition (by head office managers) of an appropriate structural context that induced managers in the subsidiary to behave in desirable ways. In terms of the current study, the suggestion is that by defining an appropriate parent–subsidiary relationship, corporate management can either promote or inhibit mandate development in subsidiaries. Thus, key parent–subsidiary variables, such as level of autonomy, communication channels and access to resources, are *ceteris paribus* associated with the presence or absence of mandates in the subsidiary.

Burgelman (1983) showed that the reality is more complex: subsidiary behaviour can be both induced from above or "autonomous," bubbling up from below in an unplanned, unsystematic way. Autonomous behaviour arises more through the internal workings of the subsidiary than through its structural context. Furthermore, as the subsidiary evolves, its own unique capabilities grow (Prahalad and Doz, 1981) further limiting the parent company's ability to control it through the structural context. This means that, for the current study, the internal attributes of the subsidiary are also important predictors of subsidiary initiative, and hence of subsidiary mandates. Figure 1 indicates the proposed relationships.

It should be highlighted here that the uni-directional causality between structural context and mandates and between subsidiary attributes and mandates is a simplification of reality. Results from the previous study (Birkinshaw, 1995b) suggested that subsidiary attributes and subsidiary mandates have a mutually beneficial relationship, while the long-term impact of enhanced subsidiary attributes is (eventually) an enhanced structural context. The suggestion is that all three constructs tend to move together, so a flow of subsidiary mandates is driven by, and should also enhance, both

Figure 1
Conceptual Framework



internal subsidiary attributes and the structural context. In the current study, it is impossible to disentangle causality because the data is cross-sectional rather than longitudinal.

The final element of the basic research model is the impact of the business environment on subsidiary mandates. As proposed by Bartlett and Ghoshal (1986) and others, the subsidiary's role should be a function, in part, of the opportunities in the local market. Where the local market offers the potential for competitive upgrading (Porter, 1990), the opportunity for taking mandate responsibilities should be greater. There are also issues of industry globalization: opportunities for subsidiary mandates will vary according to the need for global integration.

In sum, the conceptual framework implies a number of competing hypotheses regarding the determinants of subsidiary mandates.

- Is the relationship with the parent the key determinant?
- Are the attributes of the subsidiary itself more important?
- Is the local industrial environment the most important variable?

Understanding the relative importance of the three sets of factors is a key objective of this research.

Consequences of a Subsidiary Mandate

The long-term expectation for a subsidiary with mandates is that it be effectively managed, and that it contributes to the performance of the subsidiary. Two dependent variables are proposed for the complete framework, both of which should be enhanced by subsidiary mandates.

- Subsidiary value-added is a measure of the subsidiary's proven ability to contribute to the strategic imperatives of the corporation.
- Subsidiary performance is measured in terms of conventional estimates such as return on investment and market share.

Measures will be discussed in a subsequent section, but the idea is that subsidiary mandates, if they are worthwhile, should positively affect both the financial performance of the subsidiary and its more intangible role in the corporation.

4. RESEARCH HYPOTHESES

The Parent Subsidiary Relationship

There is a long history of research into various facets of the parent–subsidiary relationship. Traditionally, studies emphasized specific factors such as the level of autonomy, formalization and control (e.g., Brandt and Hulbert, 1977; Gates and Egelhoff, 1986; Hedlund, 1981; Negandhi and Baliga, 1981) and their impact on subsidiary performance. More recently, the recognition that subsidiaries often have very different roles has pushed researchers toward contingency models in which specific aspects of the parent–subsidiary relationships are hypothesized to predict key behaviours (e.g., Ghoshal and Bartlett, 1988; Ghoshal and Nohria, 1989; Jarillo and Martinez, 1990; Roth and Morrison, 1992), rather than performance per se. The latter approach has generally been more successful and it is adopted here.

What aspects of the parent–subsidiary relationship would be expected to increase the subsidiary's contributory role? Ghoshal's (1986) research on innovation in large multinationals is the most relevant previous study. He showed that the creation of innovation in subsidiaries was associated with high autonomy, high parent–subsidiary communication and high normative integration. While the concept of subsidiary mandates is not identical to innovation creation, it is close enough to work with the same set of relationships. More specifically, the subsidiary's ability to pursue mandate opportunities would be expected to increase with greater decision-making autonomy and with high levels of parent–subsidiary communication. Normative integration, i.e., the extent to which shared values exist across the corporation, is very hard to assess at the subsidiary level (Ghoshal polled head office managers). This facet was replaced in this study with a measure of credibility, i.e., a belief by parent company management that subsidiary management will deliver on its promises. This has been identified as an important factor in world mandate winning strategies (e.g., Bishop and Crookell, 1986; Moore, 1994). It is also a reflection of the extent of normative integration between parent and subsidiary.

Propositions
The presence of subsidiary mandates is associated with:

1. high strategic autonomy
2. high parent–subsidiary communication
3. high credibility.

Internal Subsidiary Attributes

While the parent–subsidiary relationship defines the broad context in which the subsidiary operates, attributes of the subsidiary itself can potentially be as important in shaping its contributory role. The literature suggests three aspects in particular.

First, strong internal communication between different functions and across management layers increases the level of integration (Lawrence and Lorsch, 1967) and hence opportunities for the cross-fertilization of ideas (Hedlund, 1994). Ghoshal (1986) confirmed the relationship between intra-subsidiary communication and innovation. As shown by Ghoshal and Bartlett (1994), internal relationships can also foster co-operation, initiative and learning.

Second, an entrepreneurial culture (Kuratko et al., 1990), in which risk taking and entrepreneurial activities are promoted, is liable to be associated with subsidiary value added. Several clinical studies have documented the presence of an entrepreneurial culture as a key pre-requisite for innovation (e.g., Kanter, 1985; Pinchott, 1985; Quinn, 1985), so the expectation here is that the subsidiary's ability to pursue world mandates will also be, in part, a function of its entrepreneurial culture. Note that Ghoshal and Bartlett's (1994) notion of an internal context that facilitates initiative is closely related to the idea of an entrepreneurial culture. The position taken here is that intra-subsidiary communication is a necessary but not sufficient condition for an entrepreneurial culture, because authority and reward structures also have to be aligned to foster entrepreneurship.

Third, the subsidiary's capabilities are also hypothesised to be an important determinant of subsidiary value added. Previous research has shown that subsidiary capabilities are associated with innovation (Ghoshal, 1986) and the existence of world mandates (Roth and Morrison, 1992). The logic is that for the subsidiary to pursue a world mandate it must have a unique capability to "sell" to the parent company. This capability has traditionally been thought of as a primary function, such as R&D or manufacturing, but it could also be an administrative capability or special expertise with managing international relationships. The key issue here is the relative capability of the subsidiary vis-à-vis sister subsidiaries, in that the world mandate is typically awarded to the entity within the corporation that can most effectively undertake it.

Propositions
The presence of subsidiary mandates is associated with:

4. strong internal relationships
5. an entrepreneurial atmosphere
6. high subsidiary capabilities.

The Business Environment

There are two distinct aspects of the subsidiary's business environment to consider. First, the "local" environment consists of the set of suppliers, customers, competitors and regulatory bodies with which the subsidiary interacts in its host country. As observed earlier, several academics have proposed that the nature of the local environment should have a bearing on the role the subsidiary plays in the corporation (e.g., Bartlett and Ghoshal, 1986; Ghoshal and Nohria, 1989). All else being equal, a more dynamic local business environment would be expected to afford more opportunities, in the form of potential mandates, for the subsidiary. Dynamism, in this study, is taken to be the dimensions of the local economy discussed by Porter (1990) namely competitive rivalry, demanding customers and supporting and related industries.

Proposition
The presence of subsidiary mandates is associated with:

7. demanding customers, strong competitive rivalry, and strong supporting and related industries in the local business environment.

Second, the level of globalization needs to be considered. Structural drivers, such as the availability of economies of scale, make certain industries more prone to global integration than others (Kobrin, 1991). At one end of the spectrum, the subsidiary's activities are integrated with the rest of the corporate network. Porter (1986) referred to these as "pure global" industries. At the other end of the spectrum, competition in one national market is not substantially affected by competition in the next. These are referred to as the "multidomestic" industries.

It is proposed here that the presence of subsidiary mandates is directly related to the level of globalization of the industry. Multidomestic industries do not offer much scope for the subsidiary to gain mandates because they tend to be organized as "miniature replicas" of their parent company (White and Poynter, 1984). Global industries, in contrast, require a high level of specialization from subsidiary companies as each focuses on undertaking certain specific activities on behalf of the multinational corporation as a whole. Full-scope mandates seem rather unlikely in pure global industries, but reduced scope mandates such as for manufacturing or R&D only, are strongly predicted.

Proposition
The presence of subsidiary mandates is associated with:

8. a high level of industry globalization.

Subsidiary Performance and Subsidiary Mandates

The earlier discussion suggested that subsidiary mandates could be an important component of subsidiary performance (Roth and Morrison, 1992). In this study we considered two aspects of performance:

- a perceptual measure of the strategic value of the subsidiary (Bartlett and Ghoshal, 1986) — subsidiary value-added; and
- a more traditional estimation of performance in terms of market-based (sales growth, market share) and financially based (return on investment, profit) criteria.

Ceteris paribus, it is expected that the presence of a subsidiary mandate will positively relate to these variables.

Propositions
The presence of subsidiary mandates is associated with:

9. high financial performance in the subsidiary
10. high market performance in the subsidiary
11. high subsidiary value-added.

Subsidiary performance could be also affected by a number of other variables including any of the independent variables specified in propositions 1 through 8 above. While not specified formally as research propositions, the analysis below includes an assessment of the association between the eight independent variables, subsidiary value-added and subsidiary performance.

Subsidiary Initiative

As shown in earlier phases of this research program (Birkinshaw, 1995b), mandates can be won in a variety of ways. Two broad types of subsidiary initiative were identified:

- internal initiatives, focused on opportunities within the corporate system such as reconfiguring existing assets and bidding for corporate investments; and
- external initiatives, focused on new product or business opportunities outside the corporate system.

On the understanding that not all initiatives are successful, the study sought to identify the factors that help to predict initiative success or failure. However, given the lack of previous research in this area, it was thought appropriate to define research questions rather than propositions.

Research Questions
What factors are associated with:

1. internal initiatives
2. external initiatives
3. initiative success?

5. METHODOLOGY

The research propositions were tested using data gathered via a questionnaire survey from a sample of 87 Canadian subsidiaries. While insights from the earlier studies are used to interpret results, the data presented here is exclusively from the questionnaire survey.

Questionnaire Development

The questionnaire developed through a three-stage process. First, three academicians reviewed a draft questionnaire. They suggested improvements in wording and gave some advice on layout. Following major revisions, the questionnaire was then sent to the six subsidiary presidents who had been involved in the previous phase of the study. They filled out the questionnaire, while the lead researcher did likewise on the basis of his extensive knowledge of the six companies. Responses were then compared, and where differences between "actual" (i.e., from the subsidiary president) and "expected" (i.e., from the lead researcher) were substantial, the wording was amended. In most cases, responses were very similar. At the same time, a total of four pairs of subsidiary and head office managers were asked to fill out the questionnaire, to ensure that the subsidiary's answers were consistent with the perceptions in head office. No significant differences were found. The inter-rater reliability for these four pairs was 0.61 (using Cohen's Kappa), an adequate but not exceptionally good result. Finally, once the second round of corrections had been made, the questionnaire was sent to three managers in *another* subsidiary. The researcher met with these individuals to discuss their responses, which resulted in a few small changes. This three-stage process was necessary because, as detailed below, several measures had to be specially developed for this study.

Construct Measurement

Where possible, existing construct measures were used, most notably from the previous multinational subsidiary studies by Roth and Morrison (1992) and Ghoshal (1986). Appendix A provides a detailed description of the measures used for each construct.

Sampling Methodology

A list of Canadian subsidiaries was drawn up using a variety of CD-ROM products and directories, including the *Financial Post 500, Report on Business 1000* and the *Disclosure* data bases. Unfortunately, no definitive list could be located because most foreign-owned subsidiaries are private corporations. Considerable cross-checking was therefore necessary.

There were two major criteria for selection:

- sales revenues in 1992 of at least $80 million; and
- a manufacturing presence in Canada.

The $80 million cut-off was selected because the strategic imperatives for a large or mature subsidiary are fundamentally different from those of a small and/or growing subsidiary. Many subsidiaries below $80 million in sales are still sales-only operations whose mandate is to maximize sales revenues and little else. In contrast, once a subsidiary starts to receive direct investment in manufacturing, marketing or other functions, it has to balance its time between selling and other activities. The question of value-added then comes into play. Certainly, $80 million does not represent a definitive boundary, but experience suggests that it is a reasonable one.

The manufacturing criterion was to ensure that large importers (e.g., many automobile companies) were excluded, because the notion of subsidiary mandates simply does not apply in such cases. Manufacturing was broadly defined to include, for example, software development. This procedure yielded a list of 270 Canadian subsidiaries.

The questionnaire was sent to the president or chief executive officer of each subsidiary. Five packages were returned because the company name and/or address was incorrect. A total of 92 responses were received, five of which stated that the subsidiary would not be filling out the questionnaire (reasons included company policy and no manufacturing). This meant 87 returns were usable, a response rate of 32 percent and an acceptable return within the normal expectations of a survey of this type. The characteristics of the responding subsidiaries are listed in Table 1.

Table 1
Characteristics of Companies Surveyed

Average Revenues 1994	$385 million	
International responsibilities:	With	44
	Without	43
Home country of parent company:	United States	64
	Germany	5
	France	5
	United Kingdom	4
	Switzerland	4
	Japan	3
	Sweden	2
Industries represented:	Consumer goods	14
	Computers/software	9
	Electrical/electronic	9
	Automotive and parts	9
	Miscellaneous industrial	9
	Pharmaceutical	8
	Oil and gas	7
	Chemicals, industrial	6
	Aerospace	4
	Telecommunications	3
	Miscellaneous	2

6. RESEARCH FINDINGS

The statistical package SPSS 6.0 for Windows was used for the analysis. Propositions were tested using linear regression models, grouped according to the three major dependent variables, namely subsidiary mandate, subsidiary performance and subsidiary initiative. Table 2 lists the variables in each of the regression models. A correlation matrix for all the key variables is presented in Appendix B.

Table 2
Summary of Regression Models Performed in the Data Analysis

Model	Dependent Variables	Independent Variables	Which Propositions?
1	**Subsidiary mandate** (mandate revenues, earned mandate revenues)	Autonomy Communication Credibility Internal relationships Entrepreneurial atmosphere Capabilities Local dynamism Industry globalization	Propositions 1, 2, 3, 4, 5, 6, 7, 8
2	**Subsidiary performance** (value-added, market performance, financial performance)	Subsidiary mandate Autonomy Communication Credibility Internal relationships Entrepreneurial atmosphere Capabilities Local dynamism Industry globalization	Propositions 9, 10, 11
3	**Subsidiary initiative** (internal initiative, external initiative, initiative success)	Subsidiary mandate Subsidiary value-added Autonomy Communication Credibility Internal relationships Entrepreneurial atmosphere Capabilities Local dynamism Industry globalization History of strong leadership	Questions 1, 2, 3

Determinants of Subsidiary Mandate

Respondents were asked to answer three questions:

- whether their subsidiary had any mandate responsibilities; if yes,
- the percentage of their revenues attributable to the mandate; and
- the percentage of that total that was "earned" through the entrepreneurial efforts of subsidiary management.

In this analysis we used the second answer (mandate revenues) and the product of the second and third answer (earned mandate revenues) as dependent variables.[4] Both models offered broadly similar findings (see Table 3). Upstream capabilities (i.e., R&D and manufacturing) were the most significant predictor of the presence of a mandate. This finding was further confirmed by the presence of R&D expenditure in the latter model. This is consistent with previous studies (e.g., Roth and Morrison, 1992), underlining that the subsidiary's capabilities are critical to the attainment of mandates.

Table 3
Results of Multiple Regression Analysis
Mandate Revenues and Earned Mandate Revenues as Dependent Variables

Variable	Mandate Revenues (%)	Earned Mandate Revenues (%)
Intercept	57.6 (18.9)	52.3 (13.9)
Autonomy		
Communication with parent		
Credibility with parent		
Sub. internal context		
Sub. entrepreneurship index		
Sub. upstream capabilities	6.69 (1.75)***	2.50 (1.40)^
Sub. downstream capabilities	-0.66 (2.17) **	-4.13 (1.59)*
Sub. R&D as % of sales		1.11 (0.45) *
Local market vitality	-6.77 (2.84) *	-6.6 (2.14) **
Level of global integration		
F Value	9.43	9.51
Prob > F	.00	.00
R squared	0.27	0.33
Adj R Squared	0.24	0.30

Notes: ^ $p < 0.1$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$
Standard errors in parentheses.

Downstream capabilities were also significant in the two models but with a reverse sign, which indicates that the presence of downstream capabilities, such as marketing and sales, is a predictor of the *absence* of a mandate. This tends to suggest that subsidiaries without mandates are particularly strong in the marketing and sales area, rather than the premise that mandate subsidiaries are weak in an absolute sense.

The other significant predictor variable was local market dynamism, but the relationship was the opposite of what was predicted. This suggests that a dynamic local market tends to stifle mandates rather than promote them, contrary to what Porter (1990) would predict. Further scrutiny of the individual items in the local market dynamism scale, however, showed that "local market competitiveness" was driving this unexpected finding.[5] That is, mandate subsidiaries tended to be found in relatively uncompetitive local environments. This is still hard to explain: one possibility is that subsidiaries perform better in uncompetitive local markets and are able to win mandates on the basis of that performance. Another possibility is that mandate subsidiaries are inherently outward-looking, and are therefore unaware of competitive pressures in their local market.

In sum, the analysis of factors associated with subsidiary mandates yielded somewhat surprising results. None of the parent–subsidiary attributes were significant, and the local market dynamism variable was significant in the unexpected direction. It was, however, confirmed that the subsidiary's capabilities, specifically its R&D and manufacturing capabilities, are the most critical predictors of the presence or absence of a mandate. Further analysis showed that the only significant predictor of upstream capabilities was an entrepreneurial culture ($r = 0.30$). This hints at the importance of subsidiary entrepreneurship as the underlying driver of mandate responsibilities.

Factors Associated with Subsidiary Performance and Value Added

The second regression model included all the independent variables from the first model as well as the two measures of subsidiary mandate (Table 4). The most important finding from this model was the *absence* of a direct relationship between subsidiary mandate and either financial or market performance. This is not surprising, because locally oriented subsidiaries can be as well-managed as mandate-holding subsidiaries. A significant result was, however, obtained for the relationship between earned exports and subsidiary value-added, which is a subjective estimate of the strategic importance of the subsidiary to the multinational corporation. Subsidiary value-added, in turn, had a very significant impact on financial performance. This leads to the implication that mandates have at least an indirect (and positive) effect on performance.

In terms of the other variables in the equation, subsidiary capabilities were the major driver of subsidiary performance. Upstream capabilities were significant predictors of perceived value-added. Downstream capabilities were significant in all three models and, more critically, the most significant predictor of financial and market performance. Bearing in mind that subsidiary value-added is itself an important predictor of financial performance, the implication is that downstream

Table 4
Results of Multiple Regression Analysis
Subsidiary Value-Added, Financial Performance, Market Performance

Variable	Subsidiary Value-Added	Financial Performance	Market Performance
Intercept	0.07 (0.72)	1.94 (1.5)	1.08 (1.16)
Autonomy			
Communication with parent		-0.34 (0.19)^	0.28 (0.15)^
Credibility with parent	0.28 (.09)**		
Sub. internal context			
Sub. entrepreneurship index	0.19 (.08)*		
Sub. upstream capabilities	0.14 (.06)*		
Sub. downstream capabilities	0.15 (.07)^	0.49 (.15)**	0.48(.12)***
Sub. R&D as % of sales			
Local market vitality		-0.51(.19)**	-0.3 (.15)*
Level of global integration	0.15 (.08)*		
Exports as % of sales			
% exports "earned" by subsidiary	0.01 (.01)*		
Subsidiary value-added (subj.)		0.76(.18)***	
F Value	10.2	11.4	9.95
Prob > F	.0000	.0000	.0000
R squared	0.49	0.37	0.34
Adj R Squared	0.44	0.34	0.31

Notes: ^ $p < 0.1$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$
Standard errors in parentheses.

capabilities have both a direct and indirect impact on performance while upstream capabilities have only an indirect effect (via subsidiary value-added).

Credibility with the parent company and an entrepreneurial culture were both associated with subsidiary value-added, as might be expected. Parent–subsidiary communication appeared to be a mixed blessing, being positively associated with market performance and negatively associated with financial performance. The suggestion here is that marketing and sales activities require close co-ordination with the parent company while a relatively hands-off approach by the parent company (i.e., with low communication) may be best for overall financial performance.

The role of local market dynamism, again, was contrary to what might be predicted. This suggests that stronger results are obtained in those subsidiaries with relatively placid local markets. Further investigation is needed to explain this result convincingly.

The most interesting finding from this analysis, in broad terms, is the critical role of subsidiary value-added. From the earlier phases of research, it seems likely that many subsidiaries are undertaking activities that are important for the corporation but which do not directly affect the bottom line of the subsidiary. The current analysis confirms this, by suggesting that there is an underlying sense of qualitative value-added in the subsidiary, that is affected by a host of factors including mandate responsibilities, entrepreneurial spirit and leadership. Value-added also has a substantive impact on the financial performance of the subsidiary, although it is impossible to estimate the extent to which the impact is a fair reflection of perceived value-added.

Factors Associated with Subsidiary Initiative

This model included all the variables in the previous regression model, plus a single-item measure asking respondents if the subsidiary had a history of strong leadership. Table 5 lists the results of the regression analysis. Note that only 44 of the 87 companies in the sample were able to answer the questions about initiative, i.e., only 44 companies claimed to have international responsibilities. From a methodological perspective, this means that significant relationships are much harder to detect.

The presence of internal initiative was predicted only by the entrepreneurial culture in the subsidiary. Non-significant relationships (taken from the correlation matrix) suggested that internal initiatives were also associated with low autonomy, high communication, a strong internal context and strong internal capabilities. These results are all in keeping with the findings of the clinical study reported in Birkinshaw (1995b), though they must be viewed as very tentative given the small sample size.

External initiative was predicted by rather different factors. The combination of low communication, low credibility and high autonomy (not significant) was the exact opposite of the conditions in which internal initiative thrived, a result which is in keeping with the previous phase of this study. It is interesting to note that while the facets of the parent–subsidiary relationship had no apparent impact on the existence of world mandates (Table 3), they are important predictors of the type of initiative. This suggests that there are two groups of mandated subsidiaries, defined by the extent of integration with the parent company:

- those that are relatively autonomous and outward-looking, developing new products and new markets; and
- those that are relatively integrated and inward-looking, bidding for corporate investments and reconfiguring existing operations.

External initiative was also predicted by a history of strong leadership in the subsidiary, high R&D expenditure and subsidiary exports. This finding is consistent with the notion that mandates are driven primarily by the internal attributes of the subsidiary.

Table 5

Results of Multiple Regression Analysis

Internal Initiative, External Initiative, Success with Initiative

Variable	Internal Initiative	External Initiative	Success with Initiative
Intercept	1.55 (.72)	-0.46 (.92)	-0.51 (1.62)
Autonomy			-0.44 (.26)^
Communication with parent		-0.3 (.15)*	
Credibility with parent		-0.36 (.14)*	
Sub. internal context			
Sub. entrepreneurship index	0.27 (.13)*		
Sub. upstream capabilities			0.23 (.11)*
Sub. downstream capabilities			
Sub. R&D as % of sales		0.06 (.02)*	
Local market vitality			
Level of global integration			
Subsidiary % exports		0.01 (.01)^	
% exports "earned"			
Sub. value-added			
History of strong leadership		0.27 (.08)**	0.19 (.06)^
F Value	4.07	6.8	3.7
Prob > F	0.05	0.0002	0.02
R squared	0.09	0.49	0.23
Adj R Squared	0.07	0.42	0.17

Notes: ^ $p < 0.1$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Standard errors in parentheses.

Finally, respondents were asked how successful their subsidiaries had been in gaining mandates through initiative. The results suggested that high autonomy, strong upstream capabilities and strong leadership were most closely associated with success. These findings confirm the importance of capabilities as the driver of subsidiary value-added. The only slightly surprising factor was high autonomy because, in the previous section of this report, internal initiatives were typically associated with relatively low autonomy. One possibility, which needs further investigation, is that maybe internal initiatives have a lower success rate than external initiatives.

Table 6 summarizes the major findings from the multiple regression analysis. It shows that most of the propositions were not supported, though the relatively small sample size made it quite difficult to establish significant relationships. Notwithstanding sample size issues, several important and interesting results were observed, and these are discussed in the following section.

Table 6

Summary of Findings from Data Analysis

Model	Dependent Variables	Independent Variables
1	**Subsidiary mandate**	Proposition 1 -- not supported Proposition 2 -- not supported Proposition 3 -- not supported Proposition 4 -- not supported Proposition 5 -- not supported Proposition 6 -- supported Proposition 7 -- not supported Proposition 8 -- not supported
2	**Subsidiary performance**	Proposition 9 -- not supported Proposition 10-- not supported Proposition 11-- supported
3	**Subsidiary initiative**	Research question 1-- Entrepreneurship associated with internal initiative. Research question 2 -- Parent communication, credibility, local R&D, subsidiary exports and strong leadership associated with external initiative. Research question 3 -- Autonomy, upstream capabilities and strong leadership associated with initiative success.

7. DISCUSSION

In essence, this paper's objective was to understand why some subsidiaries have mandate responsibilities while others do not. While the above analysis captures some of the complexities of addressing the research question, this discussion offers a more general interpretation of the evidence, in terms of its implications for subsidiary management and public policy.

Implications for Subsidiary Management

The key observation, from the perspective of subsidiary management, is the primacy of the subsidiary's upstream capabilities, specifically R&D and manufacturing, as the drivers of success. Upstream capabilities were associated directly with export responsibilities, value-added and initiative, and indirectly with financial performance. The message here is that mandate success comes from within the subsidiary. Crookell (1986) and others have long observed that mandates are earned not given, and this study provides solid evidence of this statement. Perhaps the more interesting finding relates to the role of leadership and an entrepreneurial culture as driving forces behind subsidiary value-added. This suggests that even if the subsidiary's capabilities are limited, upgrading can be driven by subsidiary management. Certainly, there were many cases in the research of subsidiaries that had built mandate responsibilities where none had previously existed. Typically, they started small, offering to take responsibility for a single manufacturing run for the North American market, for example, but over time their capabilities grew and their ability to take greater responsibilities was enhanced accordingly. Strong visionary leadership, coupled with enthusiasm and involvement throughout the organization were the fundamental drivers of this process.

A second important finding is the relative lack of importance of any aspects of the parent–subsidiary relationship in predicting the presence of subsidiary mandates. Taken in conjunction with the subsidiary capabilities finding, this suggests that comments along the lines of "we can't win mandates because our corporation is too highly centralized" are not always accurate, and may reflect a lack of creativity and initiative within the subsidiary itself. The results in Table 5, in fact, suggest an even more interesting finding, namely, that aspects of the parent–subsidiary relationship may affect the *type* of initiative that is possible, but not the presence of initiative *per se*. The tentative suggestion is that tightly controlled subsidiaries should pursue internal initiatives, while more autonomous subsidiaries should pursue external initiatives. It would be inappropriate to state the results in simple prescriptive terms, but the evidence leans toward this recommendation. The interview findings are also consistent with this position.

A third issue which is important to both subsidiary and parent-company management is the role of "perceived value-added." As this study showed, the presence of a mandate had a positive impact on subsidiary value-added which in turn had a positive impact on subsidiary performance. While there was no direct relationship between mandate presence and performance, there was clearly a sense among subsidiary managers that head office perception was favourably influenced by mandate presence and that there were liable to be longer-term links to performance. It is, perhaps, not that important to dwell on the specifics of subsidiary performance, because they depend so much on transfer pricing and the internal success measures used. What is probably more important, from the subsidiary's point of view, is its "strategic importance" to the corporation, because that is a strong predictor of the type of role it will be given (Bartlett and Ghoshal, 1986). In this regard, mandate status must be seen as central to the long-term success of the subsidiary.

Implications for Canadian Policy Makers

The key insight from this study is that we cannot "blame" the parent company in the United States or elsewhere if we believe the level of subsidiary mandates in this country is too low. Mandates are gained through subsidiary initiative, and this initiative can be directed internally (e.g., bidding for new corporate investment) or externally (e.g., starting a new business locally). In both cases, it is the entrepreneurship and leadership of the subsidiary, and its underlying capabilities, that are the drivers of success. Government support should therefore be directed, where possible, toward ensuring that the quality of management in Canadian industry is enhanced, so entrepreneurially minded business enterprises are nurtured. While the importance of entrepreneurship to Canadian industry has been recognized for a long time, it has never been so explicitly identified as a success factor in Canada's foreign-owned sector.

In broader terms, there is reason to believe that Canadian subsidiary management is successful when it comes to initiative and mandates. Over half the companies in the sample had a mandate of some sort, the vast majority of which were "earned" through subsidiary management. Furthermore, anecdotal evidence from interviews, industry meetings and round-table discussions suggests that most subsidiaries in Canada understand the need to be entrepreneurial — the basic theme of this paper. The greater challenge, which many appear to be grappling with at the moment, is the specific steps to be taken to become entrepreneurial.

The analysis also highlighted the importance of R&D as a driver of mandate success, but the level of R&D tax credits in this country is such that greater enhancements would probably be of limited utility. Respondents noted that R&D is currently up to 50 percent cheaper in Canada than in the United States, but most U.S.-based multinational corporations still leave the majority of their R&D activities at home. It would appear that the most difficult challenge, in terms of R&D, is gaining the initial investment. Once that is in place, additional increments can be justified more easily. Perhaps an incremental approach to encouraging R&D is necessary, in which process development, i.e., the engineering capability attached to manufacturing operations, is built up to support adaptations to existing products, which in time leads to a fully fledged R&D capability. Several companies interviewed in earlier phases of this study had pursued such an approach, with reasonable success. It should also be noted that "internal" initiatives often require no R&D capability whatsoever. Such initiatives are typically built on the manufacturing capability of the subsidiary, which is clearly within the control of subsidiary management.

This discussion is not intended to suggest that the current system of R&D tax credits is wrong. Indeed, there was one example, taken from the author's research in Scotland, in which a Canadian subsidiary received additional R&D investment ahead of its Scottish affiliate, in part because of the relatively low cost of doing R&D in Canada, and in part because the Canadian R&D centre was already established. In other words, low cost may be an underlying condition for R&D investment, but other factors, including an existing R&D presence and initiative on the part of subsidiary management, should also exist.

The other important public policy implication in this study is the rather surprising relationship between subsidiary mandate presence and the nature of the local business environment. Simply stated, the survey evidence showed that subsidiaries were more likely to have mandates if domestic market competition was perceived to be weak.[6] This is at odds with Porter's (1990) thinking on national competitiveness. Porter's theory predicts that the national or local business environment and, in particular, the level of competition within it, drives competitive upgrading by participating firms. To the extent that mandate subsidiaries are more competitive than non-mandate subsidiaries, we would therefore expect to see a higher level of local competition in mandate subsidiaries. In reality we find the opposite.

It is not entirely obvious how to reconcile Porter's theory with the findings of this study. It would appear that Porter's study works best when there are clearly defined "clusters" of related industries that are recognized as world class, which multinational corporations seek access to through their subsidiaries. Canada's competitive clusters are mostly based in the natural resource sector, notably pulp and paper and mining. The industries represented in this study (see Table 1), by contrast, are not those for which Canada has any special advantage. Rather than gaining a mandate because of the *strength* of the local business environment, a subsidiary in such an industry might be expected to gain it because of the industry's relative *weakness.* The mandate is awarded in such instances because the subsidiary is in a relatively protected niche — it is strong because it has limited competition, and that is sufficient for the corporation to give it mandate status. This is, of course, very different from a mandate in a leading-edge cluster but, given the relatively small size of the Canadian economy, such niche mandates may be a more reasonable goal.

In more general terms, this line of argument suggests that Porter's thinking has relatively limited applicability to an economy such as Canada's which is built so heavily on foreign direct investment. Upgrading foreign subsidiaries is probably driven by very different factors from those indicated in Porter's diamond model.

This study has highlighted the importance of a relatively benign competitive environment for the creation of a niche mandate, as well as the internal drive and entrepreneurship of subsidiary management. It may be that other local environment factors can also be identified, but this is the domain of future research.

ENDNOTES

1. “Mandate” is defined here as a business, or element of a business, in which a subsidiary participates and for which it has responsibilities beyond its national market. Mandate is preferred to the term “international responsibilities” because it is more commonly used and less unwieldy. Note that this definition of mandate covers a variety of more-specific terms such as “world product mandate” and “regional manufacturing mandate.”

2. An “initiative” is defined as a discrete, proactive undertaking that advances a new way for the corporation to use or expand its resources (Kanter, 1982; Miller, 1983). A subsidiary initiative is one that is driven primarily by subsidiary management with a view to winning international responsibilities.

3. Several managers have expressed their dislike of the term “mandate.” The objection is typically that mandate implies a paternalistic head office handing out favours to subsidiaries, when in reality the subsidiary has to work hard to win and retain its responsibilities.

4. A logistical regression, using the presence or absence of a mandate as the dependent variable, was also performed. However, it yielded disappointing results, with only upstream capabilities being significant as a predictor variable. This may have been a function, in part, of the rather small sample size

5. In other words, items concerned with the quality of customers and suppliers showed no relationship with the presence or absence of a mandate, whereas items concerned with local competitiveness exhibited a negative relationship

6. It also seems unlikely that this is a flawed finding because it was replicated in a separate study (by the same author) of foreign-owned subsidiaries in Sweden.

APPENDIX A
CONSTRUCT MEASUREMENT

Subsidiary Mandates

Four mandate measures were used.

First, respondents were asked to reply yes or no to the question: “Does your subsidiary company have any international responsibilities or world mandates?”

Second, they were asked to estimate what percentage, if any, of their total sales revenues was gained through international sales.

While the first measure more accurately delineates between subsidiaries with and without mandates, the latter captures information on the scope of mandate responsibilities that is lost in the first.

Third, to capture the entrepreneurial element in the mandate-winning process, respondents were asked to estimate what percentage of their international sales was “earned” by subsidiary management rather than “given” by the parent.[1]

The fourth measure was the multiple of the second and third measures, representing the percentage of sales attributable to earned mandate exports. For example, if 30 percent of sales were exports and 80 percent of those exports were earned, this would suggest 24 percent of exports were attributable to the specific efforts of subsidiary management.

Subsidiary Performance

The measurement of subsidiary performance is notoriously difficult for two reasons:

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[1] This is a simplification of reality, of course, in that both parent and subsidiary have a role to play in the mandate process. It should be observed that, for all six pilot-study companies, this estimate was made by the researcher and by the subsidiary president with near-identical results, confirming the reliability of the measure. Also, note that this is a “stock”rather than a “flow”variable, in that it captures the result of initiative rather than the initiatives themselves. This was necessary for the cross-sectional research design.

- Performance is a function of the subsidiary's assigned role, so one may focus on market share growth while the next focuses on profitability.
- Most subsidiaries are wholly owned, so there are no publicly available data.

With these concerns in mind, the measures used by Roth and Morrison (1992) were adopted, in which respondents were asked to assess their subsidiary's performance relative to other subsidiaries for five measures (return on investment, profit, productivity, sales growth and market share). Following a principal component factor analysis, two separate constructs were identified: financial performance (return on investment and profit, Alpha = 0.94) and market performance (sales growth and market share, Alpha = 0.71).

Subsidiary Value-Added

It is recognized in the multinational subsidiary literature that each subsidiary has a unique value-adding role, depending on the mix of responsibilities and activities it undertakes for the corporation. Unfortunately, no definitive measures exist for what constitutes value-added. Gupta and Govindarajan (1991) proposed "resource inflows and outflows." Bartlett and Ghoshal (1986) suggested "strategic importance" as a subjective head office measure; and Roth and Morrison (1992) used a combination of international sales and level of integration with the parent company.

For this study, three questions were formulated on the basis of answers given in the earlier phase of research (responses on a 1-7 scale where 1 = strongly disagree, 7 = strongly disagree). Reliability for this scale was found to be acceptable (Alpha = 0.69).

1. We make a significant value-added contribution to the corporation as a whole.

2. We are globally competitive in our areas of operation.

3. We are regarded by the parent company as a strategically important subsidiary.

Subsidiary Autonomy

A seven-item scale was taken from Roth and Morrison (1992) that asked subsidiary managers to identify whether certain decisions were made in the subsidiary, at the divisional level or at head office. Reliability was found to be acceptable (Alpha = 0.72).

Parent Subsidiary Communication

Ghoshal's (1986) measures of communication were used, specifically frequency of communication, frequency of business trips to head office, strength of working relations and sharing of information. Reliability was found to be acceptable (Alpha = 0.70).

Subsidiary Credibility

A three-item scale was developed specifically for this study. Cronback's Alpha for the scale was 0.79

1. Parent company managers are confident that the subsidiary will achieve what it sets out to do.

2. The subsidiary's capabilities are typically well understood by the parent company managers.

3. The credibility of subsidiary top management is high.

Internal Subsidiary Relationships

A four-item scale was developed specifically for this study, based in part on the previous phase and in part on the concepts in Ghoshal and Bartlett (1994). Reliability was acceptable (Alpha = 0.85).

1. There are strong working relationships between managers within the subsidiary.

2. Subsidiary managers interact frequently and share ideas with one another.

3. The subsidiary chief executive officer or president works with managers to focus their efforts toward the subsidiary's objectives.

4. There is a strong sense of community within the subsidiary.

Entrepreneurial Culture

The five highest-loading items from the intrapreneurial assessment index of Kuratko et al (1991) was used to measure entrepreneurial culture. Reliability was acceptable (Alpha = 0.91).

Subsidiary Capabilities

Roth and Morrison's (1992) measures were used, whereby respondents were asked to state their relative capabilities for eight activities. Factor analysis of these responses yielded two key factors:

- upstream capabilities (R&D and manufacturing, Alpha = 0.69); and
- downstream capabilities (sales force coverage and marketing, Alpha = 0.85).

A measure of R&D intensity was also obtained by asking respondents to estimate their R&D expenditure as a percentage of total sales.

Dynamism of Local Environment

A seven-item scale was taken from Woodcock (1994). This scale was designed to tap into the four basic attributes of Porter's (1990) diamond model. Unfortunately, the items loaded very strongly onto a single factor, rather than four separate ones, so this single scale was used (Cronback's Alpha = 0.67). Measures were:

1. Local customers have exacting standards.

2. Competition in this country is extremely intense.

3. Capabilities of suppliers are very high.

4. Domestic competition is intense.

Industry Globalization

The scale used by Roth and Morrison (1992) was adopted, but not all items were usable. A factor analysis revealed one strong factor, and this was retained. Cronback's Alpha was 0.76. The measures were:

1. Business activities are susceptible to global scale economies.

2. Product awareness exists worldwide.

3. Buyer/customer needs are standardized worldwide.

4. International competition is intense.

5. Product technology is standardized and available worldwide.

6. Competitors market a standardized product worldwide.

Subsidiary Initiative

Using the questions developed during the previous phase of research, two scales were extracted.

“External Initiative” described four activities (Alpha = 0.71).

1. New products are developed in the Canadian market and sold internationally.

2. Significant extensions to existing international responsibilities.

3. New international business activities first started in Canada.

4. Enhancements to product lines which are already sold internationally.

“Internal Initiative” described three activities (Alpha = 0.64).

1. Successful bids for corporate investments in Canada.

2. Proposals to transfer manufacturing to Canada from elsewhere.

3. New corporate investments in R&D or manufacturing attracted by Canadian management.

APPENDIX B
CORRELATION MATRIX

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1Autonomy	----																				
2 Comm.	-.29	----																			
3 Credibility	.27	.25	----																		
4 Context	.38	.05	.46	----																	
5 Entrepn.	.35	-.08	.34	.54	----																
6 Upstream cap.	.14	-.04	.02	.18	.30	----															
7 Dnstream cap.	.12	.19	.29	.30	.27	.14	----														
8 R&D %	.14	-.05	.07	.04	.08	.47	.05	----													
9 Local market	-.03	.04	-.05	.04	.11	.01	.10	-.21	----												
10 Govt support	-.06	.04	-.04	.01	-.09	-.17	.18	-.04	.19	----											
11 Global integ.	-.12	-.08	-.13	-.07	.02	.16	-.14	-.02	.11	.19	----										
12 Export %	.04	-.14	-.04	-.03	-.02	.31	-.33	.25	-.26	-.06	.08	----									
13 Earned %	.14	-.07	-.02	.02	-.04	.33	-.05	.35	-.22	-.03	.01	.45	----								
14 Value-added	.11	.13	.40	.35	.42	.40	.32	.26	.03	.02	.18	.11	.29	----							
15 Citizenship	-.02	.14	.11	.15	.04	.33	.24	.18	.01	.08	.12	.08	.18	.35	----						
16 Leadership	.14	.07	.18	.17	.15	.15	.10	.05	-.01	-.06	.11	.16	.12	.30	.23	----					
17 Ext. initiative	.11	-.29	-.13	.12	.02	.38	-.08	.41	-.21	-.14	-.14	.33	.13	-.02	-.06	.26	----				
18 Int. initiative	-.16	.15	.07	.13	.31	.30	.01	.07	.21	-.03	-.10	-.08	-.03	.30	.13	.04	-.05	----			
19 Init. success	.22	-.16	.24	.09	.09	.28	.02	.27	.04	-.13	.16	.21	.09	.20	.20	.31	.41	.18	----		
20 Fin. perf.	.00	-.06	.27	.31	.26	.17	.38	.17	-.21	-.07	.06	.10	.06	.47	.18	.21	.14	.04	.11	----	
21 Market perf.	.06	.23	.22	.27	. 32	.10	.49	.06	-.12	.05	.05	.00	.05	.28	.26	.06	-.06	-.29	-.11	.44	----

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