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Canada

A Cross-National Study of Corporate Governance,
Strategy and Firm Performance

Eric R. Gedajlovic

A Thesis
in
The Faculty
of
Commerce
and
Administration

Presented in Partial Fulfilment of the Requirements
for the Degree of Doctor of Philosophy at
Concordia University
Montreal, Quebec, Canada

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ABSTRACT

A Cross-National Study of Corporate Governance, Strategy and Firm Performance

Eric R. Gedajlovic, Ph.D.
Concordia University, 1993.

Using pooled-cross-sectional data spanning the 1985-1990 fiscal years of 1030 firms, this study examines the relationship between ownership concentration, strategy and firm performance within, and across the Canadian, French, German, U.K. and U.S. national contexts. To this end, ten series of hypotheses are synthesized from the strategic management, economic, organizational theory and legal literatures.

Findings do not support the agency theory-separation of ownership and control hypothesis of a positive relationship between ownership concentration and financial performance (Berle & Means, 1932).

On the contrary, it is found that ownership concentration is unrelated to financial performance among Canadian, French, German, and U.K. firms.

It is found that the U.S. context is unique in terms of its distinct curvilinear, U-shaped relationship between ownership concentration and three measures of firm performance.

This study finds very strong support for the general proposition that ownership concentration influences the

strategic behaviour of firms. That is, results indicate that ownership concentration influences a broad array of strategic outcomes. These results are robust at the cross-national and country-specific levels.

Additionally, this study finds numerous indirect relationships between ownership concentration and firm performance at all levels of analysis. That is, ownership concentration influences a number of strategic outcomes which in turn influence corporate performance.

Lastly, it is found that national context moderates a number of important economic relationships which are of central importance to the fields of corporate governance and strategic management. That is, national context influences the nature, direction and magnitude of the relationship between,

- i. ownership concentration and firm performance,
- ii. ownership concentration and firm strategy,
- iii. firm strategy and financial performance,
- iv. as well as the entire ownership concentration-strategy-performance relationship.

In discussing these results, a number of possible explanations are discussed and suggestions regarding research avenues worth pursuing in the future are offered. The implications these results have for researchers, public policy makers and business people are also discussed.

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CHAPTER 1

Introduction

1.1 The Central Theme of This Research

How does a corporation's ownership structure influence its financial performance? Long squarely within the domain of economics, this issue has emerged as a major research topic in strategic management during the past decade. The nomenclature '*corporate governance*' is ubiquitously used to describe this field of study.

Unfortunately, many corporate governance issues of concern to strategic management scholars, managers and public policy makers remain shrouded in controversy because of ambiguous and contradictory empirical evidence. Other important corporate governance issues lie largely unaddressed.

This thesis is written with the intent of clarifying some recalcitrant issues, as well as to explore other important issues which have been the subject of only sparse scientific inquiry.

These dual objectives are very much interrelated. By addressing gaps in our understanding of the relationship between ownership concentration, corporate strategy and firm performance, this study takes on the challenge posed to researchers by Miller (1981). Miller suggests that instead of

treating unexplained variance as error, researchers need to search for better explanations of underlying associations by attempting to identify potentially insightful, but unspecified factors which may facilitate, or inhibit associations between variables.

As noted by Allison (1971), additional insights can be gained by interpreting phenomena through alternative conceptual 'lenses'. In the literature review, agency, legal and organizational conceptions of the modern corporation are examined and the corporate governance and strategy consequences of each perspective are highlighted.

These perspectives stem from divergent theoretical (and normative) bases. However, they do offer complementary insights which are of use in identifying contingency factors which can improve our understanding of corporate governance dynamics.

In Chapter 3, complementary insights from the agency, legal and organizational perspectives are used to develop both specific hypotheses and an integrative model of corporate governance.

In this study, the relationship between ownership concentration and financial performance is examined with the intent of addressing how corporate strategy fits into this long standing corporate governance conundrum.

In general, this study tests the hypothesis that there is an indirect relationship between ownership concentration and

firm performance. That is, ownership influences financial performance by affecting the strategic choices which are made by managers. It is these strategic choices which directly influence corporate performance, not ownership concentration per se. In other words, this study tests the hypothesis that corporate strategy mediates the relationship between ownership concentration and performance.

Second, as noted by Williamson (1991), there exists a pressing need for cross-national studies in corporate governance. This need stems from the increasing international scope of business, and the mounting criticism of economic models which are context neutral (Granovetter, 1985; Hamilton & Biggart, 1988; Perrow, 1986).

This study addresses this criticism, which is especially relevant to the study of agency relationships, by testing the context neutrality assumption which underlies much of modern corporate governance research.

In particular, this study focuses on how national context affects the relationship between ownership concentration and financial performance. To this end, it is hypothesized that national context moderates the relationship between ownership concentration and both corporate strategy and performance.

1.2 Research Questions

Consistent with the broad research objectives of this study, the following three questions will be used to frame this research inquiry.

1. Do Ownership Characteristics Influence Strategic Behaviour?

Historically, the vast majority of empirical research addressing the separation of ownership and control has focused on its ramifications regarding corporate performance (eg. Baumol, 1959; Berle & Means, 1932; Capon, Fraley & Hoenig, 1990; Demsetz & Lehn, 1985). Considerably less attention has been devoted to the strategic consequences of the separation of ownership and control. In recent years, this trend has been reversed somewhat.

Analyses pertaining to the relationship between ownership concentration and strategic behaviour are most typically framed in terms of the agency theory assumption that managers are 'self-serving' (Bentson, 1985) and pursue their own strategic agendas at the expense of stockholders (Baumol, 1959; Jensen, 1989; Marris, 1964; Monshen, Chiu, & Cooley, 1968; Monshen & Downs, 1965).

Indeed, there have been a number of theoretical and empirical investigations geared towards the identification of strategic issues such as corporate growth (Cubbin & Leech, 1986; Marris, 1964; Monshen et al, 1968) diversification (Amihud & Lev, 1981), R&D expenditures (Baysinger, Kosnik &

Turk, 1991; Hill & Snell, 1988, 1989) and even corporate charitable contributions (Atkinson & Galaskiewicz, 1988) where managerial and shareholder interests diverge.

This study promises to contribute to our understanding of the relationship between ownership concentration and corporate strategy in two respects.

First, the vast majority of research examining ownership concentration-strategy relationships has focused on three dimensions of strategic outcomes; corporate growth (eg. Baumol, 1959; Marris, 1964), diversification (eg. Amihud & Lev, 1981) and R&D intensity (eg. Baysinger et al 1991). In this study, the relationship between ownership concentration and these strategic dimensions is re-examined with the intent of addressing some unresolved and previously unaddressed issues.

Second, this study also examines the relationship between ownership concentration and strategic outcomes such as international scope, capital expenditures, dividend payout policies and financial leverage on which the strategic management literature is relatively sparse.

2. Does Strategy Mediate the Relationship Between Ownership Concentration and Financial Performance?

Much of both the agency theory and strategic management literature is based upon the fundamental assumption that in a great many cases managers have a broad scope of discretion (Hirschman, 1970). That is, both agency and strategic

management theorists believe that the strategic decisions of top management play a pivotal role in the determination of corporate financial performance (Hansen & Wernerfelt, 1989; Rumelt, 1991).

In other words, strategic management and agency theory share two basic assumptions.

1. The existence of discretion permits managers a non-trivial amount of latitude in setting corporate strategy.
2. The corporate strategies set by top management strongly influence corporate financial performance.

Consistent with both agency and strategic management assumptions, it is hypothesized that strategy mediates the relationship between ownership concentration and performance. In other words, the relationship between ownership concentration and firm performance is an indirect one.

Almost all other empirical studies in corporate governance have either modelled financial performance as a direct function of a firm's ownership regime, or focused their analyses on the intermediary ownership concentration and strategy relationship¹.

Studies of the first sort (ie. ownership concentration-performance) can demonstrate that ownership concentration influences performance, but are unable to account for the processes which underlie this relationship.

¹ The study of Hill and Snell (1988) is a notable exception in this regard. It is discussed in relation to this study in Chapter 3.

Studies of the second sort (ie. ownership concentration-strategy) may demonstrate that ownership concentration influences certain strategic decisions, but fail to empirically establish whether the observed strategy differences materially affect performance outcomes.

In hypothesizing that strategy mediates the relationship between ownership concentration and performance, a testable model is developed which is designed to shed light on strategic processes which logically lie in between ownership concentration and performance outcomes.

3. Does National Context Moderate the Relationship Between Ownership Concentration and Corporate Strategy?

Much of the body of knowledge pertaining to corporate governance is based upon studies of large U.S. firms.

To a great extent, this phenomena may reflect the wide availability of corporate governance data in the U.S. due to the comprehensive disclosure requirements imposed upon publicly traded corporations in that country. Also, issues such as LBO's, executive compensation, and managerial accountability have been given wide media coverage making corporate governance research especially topical and important in the U.S. context.

Notwithstanding the contributions which have been made by researchers studying corporate governance among U.S. firms, there are many factors which cast doubt on the generalizability of U.S. findings to other contexts.

First, the separation of ownership and control which represents the dominant conceptual basis for the study of corporate governance is primarily a U.S. phenomenon (Chandler, 1962).

Second, previous research has stressed the need to examine economic relationships within a particular context, or frame of reference. Indeed, many detractors of economic theories of the firm have emphasized the implausibility of their context neutrality assumptions (Granovetter, 1985; Perrow, 1986).

Third, national contexts differ profoundly in terms of their '*working rules*' (Commons, 1924). Working rules are those meta structures which social systems use to pattern economic exchange. They are the '*rules of the game*' which are necessary to allow for stable patterns of exchange (Gouldner, 1960; Leblebici, 1985; Ouchi, 1980). Such working rules include corporate law, labour law, regulation, accounting standards and norms of business conduct.

By evaluating the moderating influence of national context on the relationship between ownership concentration, strategy and performance, this thesis offers two important contributions towards our collective understanding of corporate governance.

First, the findings presented here will demonstrate the extent to which economic relationships are context-specific. In particular, this study evaluates the extent to which the

large body of U.S. findings are generalizable outside that particular context.

Second, these findings will be discussed and interpreted in terms of working rules of particular relevance to corporate governance processes. In this regard, the conclusions drawn should be of interest to managers who must function in a multinational context, but also public policy makers who play an important role in creating, enforcing and re-defining these working rules, as well as shareholders and other stakeholders who are concerned with understanding how these working rules impact upon their vested interests.

1.3 Organization of the Thesis

In Chapter 2 of this thesis, the literature review begins by outlining three conceptions of the modern corporation and their implications for the study of corporate governance. In concluding Chapter 2, it is highlighted how each of the three perspectives on corporate governance offers unique, but complimentary insights into corporate governance dynamics.

In Chapter 3 a research model of corporate governance is incrementally built by highlighting how the perspectives outlined in Chapter 2 complement each other. In particular, it is demonstrated that hypotheses pertaining to corporate governance can be refined by a close consideration of national context and strategy processes.

In Chapter 4, the methodology of this study is described.

In particular, issues pertaining to sample selection, data collection, construct measurement and analytical methods are discussed.

In Chapter 5, some initial results are described. In this chapter, summary descriptive and correlational statistics are presented and some measurement issues are clarified.

In Chapter 6, the major results of this study are presented.

In Chapter 7, the major results are discussed towards the end of developing a better understanding of cross-national patterns and differences in corporate governance.

In Chapter 8, a number of possible explanations for these findings are offered and some suggestions regarding research avenues worth pursuing in the future are discussed. In this chapter, a number of implications these results have for researchers, public policy makers and business people are also discussed.

CHAPTER 2

Three Conceptions of The Corporation, Three Conceptions of Corporate Governance

In this chapter, three perspectives on the nature of the corporate form of organization derived from the economic, legal and organizational theory literatures are described. In doing so, their implications regarding corporate governance and strategy are highlighted.

These perspectives constitute broad schools of thought regarding the essential characteristics of the corporate form of organization. As such, the purpose of this chapter is not to make finely grained distinctions between theoreticians. Rather, the intent is to provide a general synthesis of the corporate governance literature. In this regard, the perspectives described below constitute archetypal conceptions of the modern corporation and serve as a useful focal point in cutting across literature from a variety of disciplines.

It is found that although the perspectives differ in terms of their normative bases, they offer complementary

insights which may be integrated into a testable model of corporate governance.

As Allison (1971) notes,

'...marked improvement in our understanding of events [phenomena] depend critically on more self-consciousness about what observers bring to the analysis. What each analyst sees and judges to be important is a function not only of the evidence about what happened but also of the "conceptual lenses" through which he looks at the evidence.'
(p.314)

Since much of the current treatment of corporate governance conforms to the agency model of the corporation, this chapter begins by discussing this perspective. Later, this perspective of corporate governance, based upon conflict between owners (shareholders) and managers is contrasted with more legalistic and organizational conceptions of the corporate form.

2.1 The Agency Model (The Goal-Attainment Device)

The Nature of The Corporation

Classical notions of property rights carried over to both modern common and civil law divide property rights into three main categories (Williamson, 1991); *Usus*, the right to use property as you see fit, *Abusus*, the right to alter, modify, or destroy your property and *Fructus*, the entitlement to enjoy and employ the fruits from your property.

According to this view, shareholders like owners of other sorts of private property are conferred with the three basic property rights of *Usus*, *Abusus* and *Fructus*. These three

property rights imply that the corporation is first and foremost a 'tool' (Selznick, 1957), or an 'instrument' (Mintzberg, 1983) for the advancement of shareholder interests (Berle, 1932). Corporations are seen as 'nexuses of contracts' (Jensen & Meckling, 1976), or systems of voluntaristic exchange (Alchian & Demsetz, 1972). Representative of this view are the following comments of Milton Friedman...

'There is one and only one social responsibility of business--to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say that it engages in open and free competition without deception, or fraud.' (Friedman, 1970)

The Function of the Executive & Standards of Efficacy

Inherent in this perspective is a very narrow role for the modern executive. The property right of *Usus* suggests that managers have a responsibility to,

'...conduct the business in accordance with [shareholder] desires, which generally will be to make as much money as possible...' (Friedman, 1970).

The property right of *Abusus* implies that the corporation is an 'expendable tool' (Selznick, 1957) which may be altered, or destroyed if it does not serve shareholder interests. Executives are seen as agents of their shareholders, and are obliged to operate the corporation in their principals' sole interests.

Table 1

The Agency Model of the Corporation

The Corporation As....	A Goal Attainment Device
Key Actors...	Managers and Shareholders
Key Focus...	The Relationship Between Managers & Shareholders Distribution of Proceeds
On Strategy...	Tensions Between Managers and Shareholders

Accordingly, standards used to evaluate this type of corporation are based on the value of the firm's shares and economic efficiency insofar as it impacts on shareholder wealth.

2.1.1 Corporate Governance Implications

Key Actors, Key Focus, Strategy Implications

The agency model of corporate governance focuses almost exclusively on the economic struggle for control between managers and shareholders.

According to Berle and Means' (1932) seminal separation of ownership and control thesis, the rise of the modern corporation has subverted the decision rights (ie. *usus* and *abusus*) of owners (shareholders). Corporate shareholders have become latent owners with few rights aside from their entitlement to a share in a firm's profit stream.

In support of this conclusion, Berle and Means found that as early as 1930, traditional family owned enterprises accounted for only 6% of the 200 largest companies in the U.S., controlling only 4% of that nation's wealth. Larner's (1966, 1970) surveys provides quite conclusive evidence that the trend towards manager controlled firms became even more pronounced in the U.S. through the early 1960's.

Similarly, Chandler (1977) chronicals the rise of managerial capitalism in the U.S. suggesting that as modern enterprise grew in size and complexity, its managers became

increasingly professional and separated from its ownership group.

While the insights of Chandler (1962, 1977) and Weber (1947) link the trend towards managerial control of large corporations to the need for professional management in light of the growing complexity of managing the modern enterprise, Fama and Jensen (1983) trace the wide separation of ownership and control to the desirable risk sharing properties of such an arrangement.

That is, Fama and Jensen contend that the separation of ownership and control permits residual risk to be allocated to those parties who may bear it at the lowest cost. As such, they conclude that the separation of ownership and control is an efficient form of specialization in that diversified shareholders are able to assume residual risk more efficiently than executives who have a large portion of their wealth tied to the fortunes of the firm they manage.

Notwithstanding the potential efficiencies of separating ownership from control that are noted by Weber (1947), Chandler (1962, 1977) and Fama and Jensen (1983), it has been widely argued that the parties to this principal-agent relationship have divergent interests. These divergent interests are posited to have a significant influence upon a broad range of strategic decisions and performance outcomes.

The basic agency problem stems from the fact that the possessors of decision rights (managers) can adopt strategies,

or policies which negatively impact upon the wealth of residual claimants (shareholders).

For instance, consider the following comments made by Mascarenhas (1989) which are representative of the current corporate governance view of strategy.

'Strategy emerges as owners and managers pursue their individual and diverse interests while coping with their own constraints, as well as conflicts they may have with one another.' (Mascarenhas, 1989; 597)

2.1.2 The Limitations of the Agency Model

While the decision and residual rights in large U.S. corporations are typically specialized and held by managers and shareholders respectively, the ramifications of this division are much less evident.

In the following six sections, some of the limitations of the agency-separation of ownership and control perspective are discussed.

A. Mixed and Inconclusive Findings

In empirical research, the separation of ownership and control is most typically evaluated by regressing a performance, or strategic variable of interest on an equity based measure of corporate control.

The relationship between ownership control and organizational performance has been tested so often that the negative impact of the separation of ownership and control on

firm profitability is often treated as a stylized fact. In fact, the relationship between ownership control and organizational performance has been evaluated so often that sufficient supporting evidence can be amassed to support a wide range of *a priori* assumptions.

One set of studies offers strong support for the separation of ownership and control thesis (eg. Baumol, Heim, Malkiel & Quandt, 1970; Grabowski & Mueller, 1972; Hill & Snell 1988, 1989).

On the other hand, in direct contrast with the separation of ownership and control thesis (but consistent with Chandler, 1977, 1990), managerial control has been found to be positively related to organizational performance (eg. Kesner, 1985; Pearce, 1983a; Pfeffer, 1972; Vance, 1955, 1968, 1978).

Still another group of studies indicate no relationship between control type and organizational performance (eg. Capon et al, 1990; Cubbin & Leech, 1986; Demsetz & Lehn, 1985; Gedajlovic, In-Press; Shapiro, 1980). Other studies offer mixed, or inconclusive results (Baysinger et al, 1991; Glassman & Rhoades, 1980; Palmer, 1973).

On balance, the researcher's reading of the empirical literature pertaining to the separation of the ownership and control suggests that in aggregate, the findings are inconclusive. This conclusion is consistent with several other reviews of the empirical literature on the separation of ownership and control issue (see for example, Kaulmann, 1987;

Leblebici & Feigenbaum, 1986; Oswald & Jahera, 1991). Indeed, the sole meta-analysis conducted on the relationship between ownership concentration and firm performance concluded that there is no relationship between these two constructs (Capon et al, 1990).

B. Measurement Problems

There is still considerable disagreement concerning the constitution of the 'manager' and 'owner' control constructs (Hunt, 1986; Kaulmann, 1987; Oswald & Jahera, 1991). The most commonly used criteria to demarcate between owner and manager controlled firms is the percentage of voting stock controlled by the largest shareholder.

While some researchers (eg. Blackburn, Lang & Johnson, 1990; Niosi, 1978; Tosi & Gomes-Mejia, 1989) follow in the Berle and Means tradition and employ a 5% stock concentration criterion as the basis for distinguishing between owner and manager controlled firms, others have used 4% (eg. Salancik & Pfeffer, 1980), 10% (eg. Amihud & Lev, 1981; Dhaliwal, Salamon, & Smith, 1982), or 20% cutoff points (eg. Salamon & Smith, 1979).

Other researchers suggest that since relatively large shareholders may operate cooperatively to constrain managers, the consideration of the equity stake of only the largest shareholder gives a misleading indication of the control type of a firm (Demsetz, 1983; Demsetz & Lehn, 1985; Slusky &

Caves, 1991). Consequently, control type has also been measured as a function of the total percentage of equity held by shareholders who own greater than .2% (Hill & Snell, 1988), or 5% (Slusky & Caves, 1991) of outstanding equity. In other cases, a herfindahl concentration measure has been used to operationalize the control type of a firm (eg. Baysinger et al, 1991). Still other researchers have used the composition of a firm's board of directors (eg. the ratio of insiders to outsiders) to distinguish between owner and manager controlled firms (eg. Kosnik, 1987).

There is also considerable disagreement concerning the nature of the relationship between stock concentration and control potential. As depicted in Figure 1, some researchers dichotomize their stock concentration measure based upon a preset criterion (eg. 5, 10, or 20% holdings of the largest shareholder).

Inherent in this approach is the belief that there exists a threshold level of control without which owners are powerless, but above which they exert total control. For instance, using a 10% equity cut-off criterion, a firm would be considered manager controlled if the largest shareholder controlled 9.9% of its voting stock, but would be classified as owner controlled if that stake was 10%.

The threshold approach is consistent with the fact that the attainment of a certain threshold amount of stock enables large shareholders to exert direct influence by virtue of

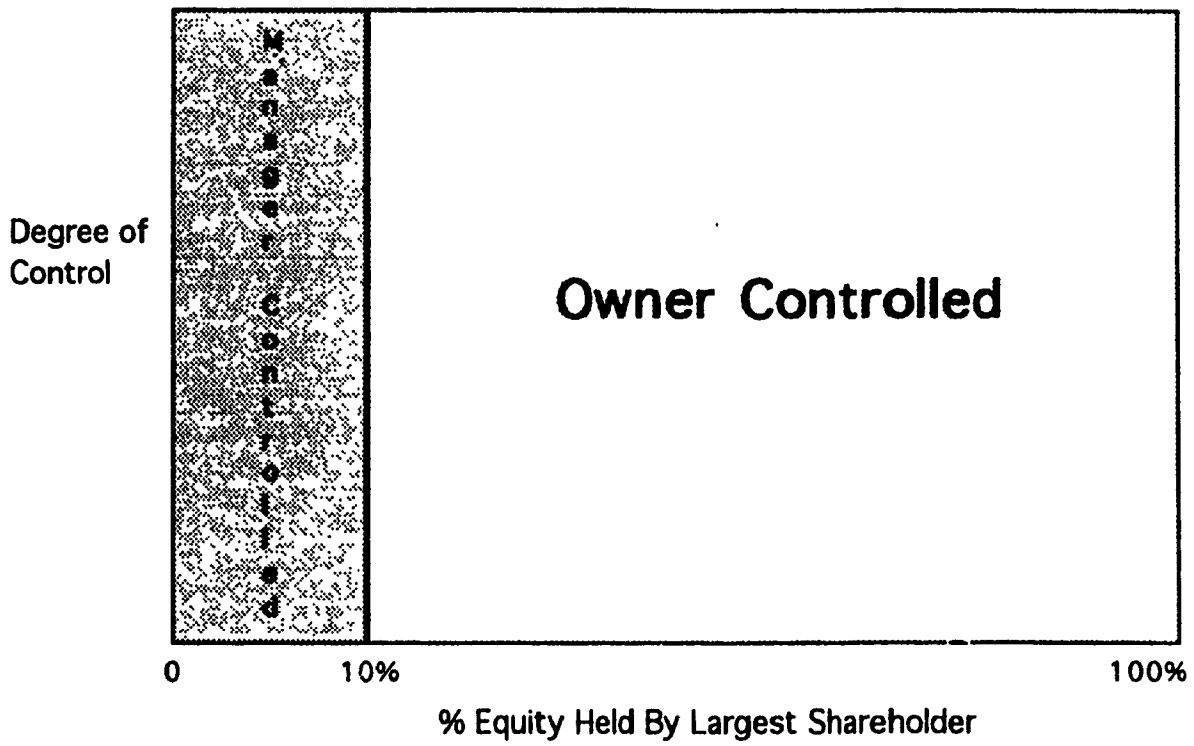


Figure 1: The Threshold Approach Using a 10% Cut-off

their ability to elect individuals, or slates of directors to the board of directors.

While theoretically appealing, the threshold approach is plagued by divergent views concerning what the relevant demarcation line between manager and owner controlled firms should be.

Other researchers have avoided the issue of how to delineate between manager and owner controlled firms by treating control as a continuous function of stock concentration (eg. Demsetz & Lehn, 1985).

As depicted in Figure 2, inherent in this measurement approach is the presumption that shareholders exert progressively more control as their stockholdings increase.

The variety of measures employed in the corporate governance literature suggests that the manager and owner constructs are still ambiguous and ill-defined. The use of a wide variety of measures makes it difficult to compare results and draw meaningful conclusions. More fundamentally, owing to the apparent poor construct and discriminant validity of the manager and owner controlled constructs, these factors point to serious practical and theoretical difficulties in using the manager-owner controlled dichotomy as the core of a theory of corporate governance.

As a consequence, it is essential that the choice of measure reflects the research question(s) asked. Notwithstanding practical considerations, the choice of

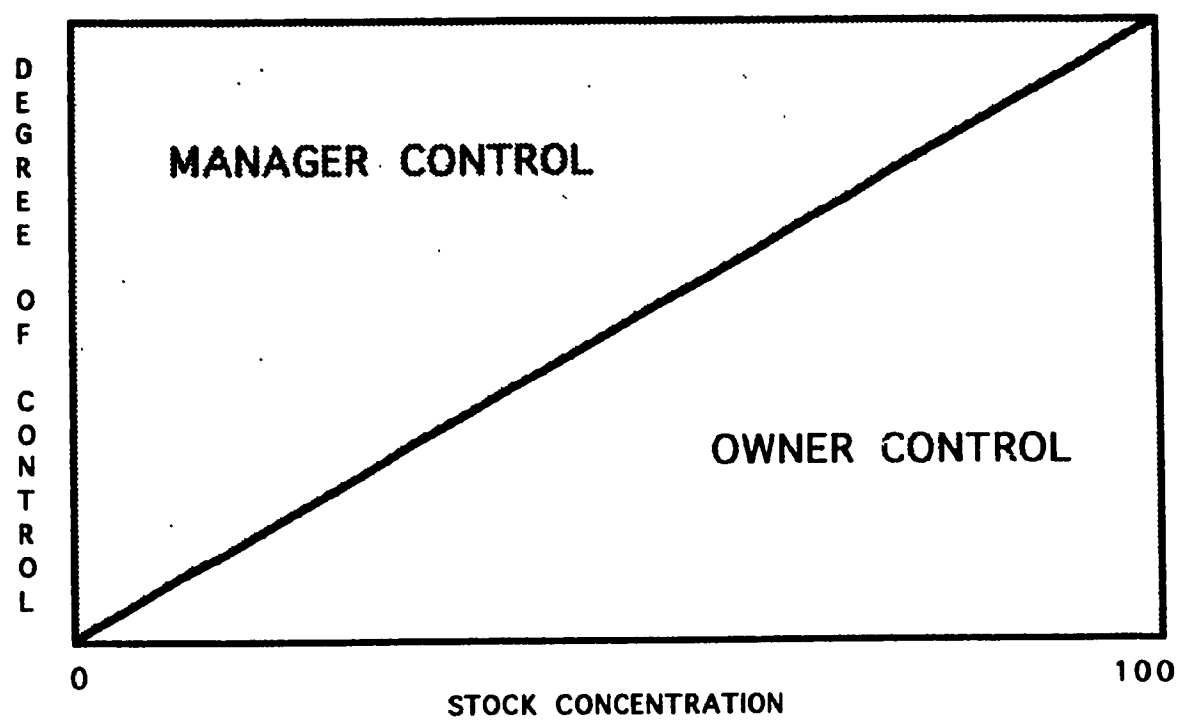


Figure 2: Control Measured as a Continuous Function of Stock Concentration

measure should be selected and justified on the basis of conceptual adequacy rather than data availability.

C. Context Neutrality

In a forthcoming study (Gedajlovic, In-Press) of Canadian *Financial Post* 500 firms, the researcher finds no support for the separation of ownership and control thesis. These findings are consistent with other studies examining the separation of ownership and control issue among Canadian firms (McFetridge, 1978; Niosi, 1978; Shapiro, 1980; Shapiro, Sims & Hughes, 1984).

In explaining the findings, the researcher highlights the fact that the separation of ownership and control thesis may only have direct relevance to the experience of U.S. firms. Berle and Means premised their separation of ownership and control thesis on the wide and growing dispersion of ownership. In the U.S., this trend has continued unabated throughout the 20th century (Larner, 1966, 1970).

However, the trend towards the separation of ownership and control has not transcended the 49th parallel. In contrast to the diffuse ownership characteristics of U.S. enterprises, mixed economies such as Canada's are marked by the more concentrated ownership of firms. Canada, like many other industrialized countries, is characterized by its mixed economy and is profoundly shaped by public sector and foreign owned enterprises.

Further, as will be discussed in Section 3.1 (D), the U.S. context is also quite distinct in terms of a number of important corporate governance dimensions including; the relative size of its private and public sectors, public policy pertaining to mergers and foreign investment, the activity of its market for corporate control, corporate disclosure requirements and norms pertaining to executive compensation.

In short, differences in U.S. and Canadian results may be attributed to differences in key institutional features of the two countries. If this is true, then the generalizability of the agency model's separation of ownership and control view outside of the U.S. is questionable.

D. Market Power & Managerial Discretion

In a departure from classical economic thought, modern agency theory carries the implicit notion that managers often have sufficient discretion to manage corporations in their interests. In traditional neo-classical economic thought, such managerial discretion does not exist.

Given the assumptions of efficient markets and perfect information, firms and their managers are viewed as price takers, and are too small and powerless to exert any influence over the demand, or supply characteristics of their markets. Under the traditional economic assumption of perfect markets, competitive forces represent the ultimate constraint, rendering managerial discretion impossible. In such models,

free market determinism is treated as an empirical reality (Hirsch & Friedman, 1986) and organizations and their managers are viewed as order takers, or processing stations for demands from the market place. Leontiades (1989) comments,

'In the classical market system, resource allocation does not require the conscious exercise of management discretion. Indeed, under the simplifying assumptions of certainty and complete information, there is no role for management to fill. The firm is merely a processing station, receiving "orders" from the market and producing "outputs" in response. Managers only contribute peripherally to this process: they are necessary in a supervisory sense, but primarily they act as unthinking agents that carry out instructions received from the market place.' (p. 92)

In a departure from classical economic thought, modern agency theory carries the implicit notion that managers often have sufficient discretion to manage corporations in their interests.

Indeed, in a world of perfectly competitive markets agency problems related to the separation of ownership and control do not exist as managers do not have sufficient discretion to pursue their own interests.

Using a similar type of argument, modern property rights theorists point out that the importance of managerial discretion may be overstated in the agency model. In this view, corporations and their managers are relegated to the role of processing demands from capital markets. In effect, property rights theorists contend that imperfections in product and factor markets are largely irrelevant because capital markets are efficient.

In a review article, Kaulmann (1987) suggests that the separation of ownership and control thesis can be surmounted on the basis of modern property rights theory. Kaulmann argues that managerial behaviour at the expense of shareholders is constrained by competitive forces in multiple domains. Kaulmann cites as examples the internationalization of trade, the partial improvement in market transparency and the lowering of transaction costs owing to improvements in communication technology. The notion that competitive forces, rather than ownership characteristics effectively constrain managers also finds strong support in the conclusions of Borins and Boothman (1985) concerning state owned enterprises.

While property rights theorists contend that managerial discretion is constrained by the efficiency of capital markets, organizational theorists highlight the fact that other contextual features of a firm's environment, in particular the demands of pluralistic parties with a vested interest in the corporation, effectively limit managerial discretion.

A steady stream of research emanating from organizational theory suggests that managerial discretion is severely limited by the environmental (Aldrich, 1979; Bourgeois, 1980; Hannan & Freeman, 1984; Pfeffer & Salancik, 1978) and political demands (Cyert & March, 1963; Pfeffer & Salancik, 1978; Thompson, 1967) placed upon the firm.

Similarly, and of particular relevance to the study of

corporate governance, is the managerial succession literature emanating from the work of Gamson and Scotch (1964). These studies strongly suggest that the role of top management is largely symbolic rather than discretionary in nature (Pfeffer & Salancik, 1978). Given the environmental and political demands placed upon managers, top management is viewed as an institution which processes demands and serves as a convenient scapegoat when organizational performance is unsatisfactory (Eitzen & Yetman, 1972; Kelley, 1971; Lieberman & O'Connor, 1972; Salancik & Pfeffer, 1977).

Still, the conclusions regarding the separation of ownership and control emanating from this stream of organizational theory research are quite consistent with classical economics and property rights theory. Managers do not have a great deal of discretion, consequently the agency problems underlying the separation of ownership and control thesis do not manifest themselves.

As in the classical economic and property rights theory paradigms, corporations and their managers are relegated to the task of processing orders.

The key difference between the organizational theory and economic views is largely one of which types of demands are processed. The economic perspective focuses almost entirely on market (economic) demands and pressures. Organizational theorists consider a more diverse set of social and political demands which need to be processed by managers.

E. A Restricted View of Stakeholders (Type and Behaviour)

Hermann (1981) and Mintzberg (1984) highlight the fact that the forces which underlie the control of our largest corporations are too complex to be captured in a simple bilateral principle-agent formulation. Among the salient factors under-specified in the agency perspective is the role that national and regional governments play in the determination of corporate policies and practises.

In its least subtle form, government involvement may include direct state ownership of corporations. However, the influence of the state over the modern corporation is often of the more subtle sort.

Regulations are patchworks of government directives aimed at selectively stipulating minimally acceptable standards where the public interest is at stake (Stigler, 1971). These standards include anti-pollution regulation, minimum labour standards, anti-trust legislation, health and safety standards and fair pricing laws etc.

Government initiatives may also effectively 'democratize' the modern corporation¹ (Mintzberg, 1984) by granting formal legal recognition to interested parties so that they have

¹ Berle and Means (1932) argue that in the absence of owners with unambiguous property rights, the income stream of the modern corporation should be apportioned to various groups '*on the basis of public policy, rather than private cupidity*' (p. 356). These fathers of agency theory are clearly suggesting a form of state initiated corporate democratization--at least in terms of the rights to residual income--if not decision rights.

direct input into how the corporation is run.

This may be done through a variety of means (Brudney, 1982), but is usually accomplished through legal requirements mandating pluralist representation on corporate boards of directors. Some commentators have even called for the inclusion of 'public interest' representatives on corporate boards (Blumberg, 1976; Stone, 1976). Western European countries typically mandate worker representation on boards (Brunsson, 1982; Mintzberg, 1984). In Yugoslavia, workers have historically selected and voted upon entire slates of boards of directors.

A fundamental problem associated with basing the study of corporate governance on the agency model is that only the vested interests of owners and managers are considered. Empirical studies 'confirming' the existence of the manager/owner controlled duality are typically structured in the following manner.

1. Owners are assumed to be interested in having their wealth maximized.
2. Firms in which the ownership stake is too dispersed to affect strategic outcomes are found to deviate from shareholder wealth maximization policies.
3. These firms are labelled 'manager controlled' and the managers of these firms are alleged to be operating in their interests, at the expense of shareholders.

Stages 1 and 2 are fairly straight forward. While it is a reasonable working assumption to maintain that shareholders make investments in corporate stock with a desire to increase their wealth, it is not altogether clear that shareholder interests, or objectives are as homogenous (Drucker, 1988; Graves & Waddock, 1991; Hansen & Hill, 1991; Vickers & Yarrow, 1988) as is suggested in (1)².

A leap of logic in standard empirical tests of the separation of ownership and control occurs at stage 3. That is, it is assumed that firms which do not maximize shareholder wealth are acting in the interests of managers. Stages 1 and 2 of empirical analyses demonstrate that certain firms are 'not owner-controlled'. The rubric 'not owner controlled' may, or may not be equivalent to manager control. The insights of Hermann (1981) and Mintzberg (1984) suggest that the control of the large modern corporation is multidimensional and substantially more complex than is implied in the owner/manager control dichotomy.

² For instance, there exists growing empirical evidence that institutional shareholders put unique pressures on firm management (eg. Graves, 1988, Graves and Waddock, 1991, Hansen and Hill, 1991). Even mainstream property rights theorists acknowledge that shareholder interests may be less than homogeneous. For instance, Demsetz and Lehn (1985) maintain that majority shareholders may hold a larger than optimal percentage of stock in certain high profile organizations (eg. sports teams, newspapers, television stations) for their 'affinity potential.' Similarly, large family run corporations which are a salient feature of the Canadian economic landscape seem to be guided by wealth preservation, rather than wealth maximization objectives (Fisher, 1989).

F. Under-Specified Process

Corporate governance research has traditionally focused on the financial performance outcomes of the separation of ownership and control. Considerably less attention has been paid to the strategic processes that logically mediate the relationship between ownership concentration and financial performance. Only within the past decade has research in strategic management begun to examine the strategic consequences of the separation of ownership and control.

In the traditional separation of ownership and control-agency model of corporate governance, ownership concentration affects the strategic choices which are made by managerial agents which in turn affects the financial performance of a firm.

Unfortunately, empirical investigations typically do not evaluate the entire ownership-strategy-performance relationship.

That is, one stream of literature has focused on the performance implications of the separation of ownership and control. These studies may demonstrate a significant relationship between ownership concentration and performance, but they do not shed light on the strategic processes (eg. levels of growth and diversification) that logically mediate the ownership-performance relationship.

A second type of empirical investigation evaluates the relationship between ownership concentration and strategic

outcomes, but does not empirically demonstrate that the ownership-strategy relationship significantly influences firm performance.

2.1.3 The Contribution of the Agency Model

The chief contribution of the agency model of corporate governance is that it highlights the divergent interests of organizational stakeholders (Eisenhardt, 1989; McGuire, 1988). As such, it brings into sharp relief the dangers of reification in organizational analysis.

Although corporations have a legal identity, they are essentially legal fictions (Jensen & Meckling, 1976), nexuses of economic (Williamson, 1985) and social exchange, not sentient entities. As such, organizations do not make strategic decisions the way individuals and groups do.

The agency model highlights the fact that organizations do not act with a single mind because economic stakeholders have divergent personal interests which put them at cross purposes on a large number of issues.

In stressing the potential influence the divergent interests of shareholders and managers have on strategy formulation and performance outcomes, and by placing political dilemmas in an economic context, the agency perspective offers a workable means by which political tensions may be modeled.

2.2 The Legal Model (The Creature of the State)

The Nature of The Corporation

The basic notion behind the conception of the corporation as a creation of the state is that the corporation is a 'legal fiction' crafted by the state for social ends.

According to this view, the state has personified the corporate form of organization by imposing on it a set of rights, duties, liberties and exposures (Commons, 1924). The emergence of this legal form of organization may be traced to the 15th century Netherlands, where it was created in order to solve a problem in shipping. Shipping, as a large scale economic enterprise requires sizable capital investments. Also, a guarantee of limited liability is necessary to secure needed investment given the risks associated with sailing the high seas.

In this regard, the corporate form of organization can be viewed as a pragmatic response to two related problems inherent in large scale modern economic enterprise. Limited liability³ and the divisibility of investment permitted by selling and trading shares addresses problems of liquidity and risk sharing which facilitates raising capital for large undertakings.

According to this view, corporations only exist because

³ Interestingly, Llyod's of London, one of the few large scale enterprises organized as a partnership, has recently reconsidered its legal status in an attempt to limit its partners' liability.

this unique form of organization has been recognized by the laws of the land. The corporation only has those rights which the state permits.

'The corporation is protected by the due process and equal protection clauses of the 14th amendment, but not of other provisions of that amendment. Though a corporation is not a citizen, it may sue in federal courts. The corporation is secure from unreasonable searches and seizures and from the risks of double jeopardy, but it may not claim the right against self-incrimination...' (Conrad, 1982; 1644)

There is no real rhyme, or reason to these judgements of the U.S. supreme court, unless one accepts that the corporation is a creature of the state and is vested with only those rights which serve the state's ends. The rights afforded the corporation are in fact quite arbitrary. Underlying this legal notion of the corporation is the premise that the corporation, as a creature of the state, could and should be made to answer to its maker. In the words of a U.S. Supreme Court Justice,

'the state need not permit its own creation to consume it.' (Conrad, 1982; 1643).

Proponents of this view contend that by surrendering control and responsibility for organizations to managers, owners have also relinquished the right that the corporation be operated in their sole interests (Berle & Means, 1932). Accordingly, the role of the executive has migrated from a sole concern with stockholder wealth maximization to one of economic statesmanship (Barnard, 1938; Chandler, 1977).

Building on the theoretical foundations of Commons

Table 2

The Legal Model of the Corporation

The Corporation As....	A Creature of the State
Key Actors...	The State, Managers & Directors
Key Focus...	Fiduciary Responsibilities of Managers & Directors Allocation of Rights & Responsibilities
On Strategy...	Rationally Formulated by Managers & Rationally Ratified by Directors

(1924), the researcher has proposed that the existence of working rules means that a variety of groups and individuals may have a legitimate vested interest in the modern corporation (Gedajlovic, 1991).

Commons (1924) highlights that working rules are a necessary component of any organized economic activity. These rules may take many forms including common law, statute law, regulation, labour law, shop-rules, business ethics, business methods and norms of conduct (Commons, 1924). These working rules are the sources of individual and corporate rights, liberties, duties and exposures. As such, inherent in any set of working rules is the normative requirement of reciprocity (Leblebici, 1985; Ouchi, 1980), which...

'...connotes that each party has rights and duties...and that there can be stable patterns ...[of]...exchange only in so far as each party has both rights and duties.'(Gouldner, 1960; 169)

Working rules are essential to organized economic activity as they serve the function of avoiding, or settling disputes by converting future uncertainty into stability, predictability and order (Leblebici, 1985).

Indeed, since the emergence of the corporation can be traced to problems of capital accumulation and risk sharing for large scale economic endeavours, the acts of government creating the corporate form are simply a series of promises and commands the state makes in the form of working rules signalling how the state will act in matters affecting the corporation. These working rules constitute the legal status

of the corporation. In this manner, working rules are in part,

'...the rules for future behaviour for...executives, courts and legislatures, laid down by former officials for future dealings with the going concern.' (Commons, 1924; 144)

Working rules enable and may inhibit, accentuate, or otherwise moderate the relative power of individuals and/or groups with a vested interest in the corporation. Indeed, Webster's New Collegiate Dictionary (1974) defines vested interest as,

'a group enjoying benefits from an existing economic, or political privilege.' (p. 1304)

This definition underscores the role working rules have in the enabling of external constraints on the corporation. Pluralist constituencies can only pose effective constraints on the corporation to the extent that they have been vested by law, or custom with a particular set of rights, or privileges.

These working rules may empower a particular interest group thereby creating the conditions under which they may influence, or constrain the corporation. For instance, the 'sound business judgement' criteria used by courts to evaluate whether managers, or directors have breached their fiduciary duties affords managers and directors a wide degree of latitude in their behaviour. Similarly, organized labour's power may stem from the collective action of its members, but the conditions permitting this concerted action only emerged when public policy makers and the force of popular opinion gave workers the right to organize.

The Function of the Executive & Standards of Efficacy

According to the legal perspective, the corporation is basically a creature of the state which was created to promote economic development in light of the efficiency advantages of large scale economic undertakings. As such, the corporation is essentially an agent of the state. Accordingly, executives are agents of the corporation rather than any one particular stakeholder.

Implicit in this notion of the corporation are social level standards by which this organizational form is evaluated. Corporations are evaluated on the basis of their contribution to social welfare, allocative equity and economic efficiency. This conception of the modern corporation underscores the important role played by government in highlighting the legalistic dimension of corporate governance.

2.2.1 Corporate Governance Implications

Key Actors, Key Focus, Strategy Implications

In contrast to the separation of ownership and control view of corporate governance, Vance (1983) proposes the following legalistic definition which has been developed by the Advisory Board of the National Association of Corporate Directors (NACD)⁴.

⁴ The NACD is a subsidiary wing of the American Management Association (AMA).

'Corporate governance ensures that the long-term strategic objectives and plans are established and that the proper management structure (organization, systems, and people) is in place to achieve those objectives, while at the same time making sure that the structure functions to maintain the corporation's integrity, reputation, and responsibility to various constituencies.' (p. 7)

The NACD definition highlights legalistic aspects of corporate governance by underscoring the fiduciary responsibilities of corporate directors. In this regard, legally mandated corporate boards serve both as ratifiers (by having the final authority over which plans, or strategies are implemented), and as watchdogs who monitor corporate/managerial performance and have the ultimate authority for the administration of the corporation's reward system (Fama & Jensen, 1983).

Not surprisingly, the NACD legalistic notion of corporate governance provides a very different view of the fiduciary responsibility of corporate officers and directors than is implicit in the separation of ownership and control perspective.

In contrast to the separation of ownership and control view, the corporation is seen as a socially significant institution operating under charter from the state. Consequently, the fiduciary responsibility of corporate officers and directors is not restricted to representing shareholders' interests, but includes the obligation to,

'...[ensure]...that the structure functions to maintain the corporation's integrity, reputation, and responsibility to various constituencies.'

Clark's (1985) comments regarding the fiduciary responsibility of corporate officers highlight an important point of divergence between economic and legal conceptualizations of corporate governance.

'A closer focus on actual rather than presumed legal doctrines and concepts might do much to refine our theory of the firm...To an experienced corporate lawyer who has studied primary legal materials, the assertion that corporate managers are agents of investors, whether debtholders or stockholders will seem odd, or loose...Corporate officers like the president and the treasurer are agents of the corporation itself.'(p. 55)

2.2.2 The Limitations of the Legal Model

While the legal perspective offers an important and useful counterpoint to the agency notion of corporate governance, it has certain limitations as well.

Like the agency model, the legal perspective offers a very restricted view of stakeholders, and underspecifies the processual dynamics that give rise to corporate strategy and performance outcomes.

The central focus of the legal model is on the legally vested prerogatives and fiduciary responsibilities of managers and corporate directors. For instance, corporate directors in many countries have the latent, legally vested power to discipline management, or otherwise influence firm behaviour (Baysinger & Hoskisson, 1990; Hermann, 1981; Zahra & Pearce, 1989).

However, many observers have suggested that in practice

the ultimate authority legally vested in the board of directors is effectively circumvented, or subverted by corporate management (Gedajlovic, 1990).

Indeed, it has been often argued that managers effectively render the board of directors an ineffective check on their prerogatives (Mizruchi, 1983; Pfeffer, 1972), a 'co-opted appendage' (Kosnik, 1987) of management through a variety of means; including selectively filtering corporate information (Mace, 1971), stacking the board with management insiders (Weisbach, 1988), frequently subordinates who are unlikely to question top management prerogatives. As well, implicit norms and the prevalence of interlocking directorships may attenuate the vigilance of outside directors who may have the top managers that they are supposed to monitor on their boards as well (Kosnik, 1987; Vance, 1983).

Another problem with the legal model is that it is difficult to directly operationalize particular working rules and isolate their effects from other confounding factors. Consequently, researchers face a difficult task in empirically evaluating the legal approach.

2.2.3 The Contribution of the Legal Model

The chief contribution of the legal model to our understanding of corporate governance is that it underscores the fact that relationships between stakeholders may be profoundly affected by the institutional context in which they

are embedded (Granovetter, 1985; Hamilton & Biggart, 1988).

In terms of corporate governance, the legal model represents a theoretical framework that may be used to supplement the traditional agency model which has been severely criticized because of its inherent context neutrality assumption (Etzioni, 1988; Perrow, 1986).

In this regard, the statutory stipulation of the scope and fiduciary responsibilities of corporate boards of directors is but one of the many working rules (Commons, 1924) which may influence corporate strategy and performance.

Similarly, other elements of a corporation's legal environment such as corporate law (Choi, Kamma & Weintraub, 1989; Margotta, McWilliams & McWilliams, 1990; Rynegaert & Netter, 1990), tax law (Lowenstein, 1985; Kaplan, 1988), labour law as well as regulation (DeAngelo & Rice, 1983; Mintzberg, 1983; Stigler, 1971) undoubtedly constitute both active and latent forces which influence corporate behaviour and performance.

In his recent book The Competitive Advantage of Nations, Michael Porter (1990) highlights the interactive effect that ownership structure and national context have on corporate strategy. Among the factors cited by Porter as being important determinants of corporate strategy include; the identity and disposition of major shareholders, corporate taxation policies, merger policy, disclosure requirements and norms pertaining to executive compensation. Porter's insights

highlight some of the key working rules that affect corporate governance processes within a given national context.

Nations often differ profoundly in terms of a number of working rules which are especially relevant to the study of corporate governance. Indeed, nations differ greatly in terms of disclosure requirements, tax laws, accounting standards, statutes pertaining to mergers and foreign control of indigenous enterprise, rules pertaining to the size and composition of boards of directors, as well as norms regarding executive compensation.

Clearly, there exists substantial divergence in cross-national corporate governance related working rules. The legal perspective highlights the importance these sorts of working rules have on the relationship between ownership, strategy and performance. This understanding highlights the importance of considering national context in the study of corporate governance in order to assess the generalizability of findings from one national setting to another.

2.3 The Organizational Model (The Coalition of Vested Interests)

The Nature of The Corporation

In contrast, to the first two perspectives, organizational theorists often portray the modern corporation as a 'coalition of vested interests' (Cyert & March, 1963). Pfeffer and Salancik (1978) expand upon this definition,

'Organizations are settings in which groups and individuals with varying interests and preferences come together and engage in exchanges and thus they are coalitions of interest groups altering their purpose and domain to accommodate alternative interests.'

This perspective on the corporation stems from many of the 'classics' of the organizational theory literature (eg. Barnard, 1938; March & Simon, 1958; Selznick, 1957; Simon, 1945; Thompson, 1967), but has also sporadically appeared in the economics literature (eg. Commons, 1924; Kaysen, 1957; Keynes, 1931; Mason, 1958; Turner, 1958) and has historically appeared as a counterpoint to the first two perspectives in the legal literature (eg. Conrad, 1982; Dodd, 1932; Klein, 1982; White, 1985). For instance, Klein (1982) a legal scholar, defines the corporation as

'...a series of bargains subject to constraints and made in contemplation of a long-term relationship.'(p. 1521)

Conrad (1982) suggests that this third view is the most 'ontologically daring' (p. 1649) of the three perspectives in that the corporation is viewed as superordinate entity which cannot be reduced to the particularistic interests of any one party. Selznick contrasts alternative perspectives with this notion by differentiating between 'organizations' and 'institutions'.

'The term "organization"... suggests a certain bareness...It refers to an expendable tool, a rational instrument engineered to do a job. An "institution" on the other hand, is more nearly a natural product of social needs and pressures---a responsive, adaptive organism.' (p. 5)

The metaphor of the modern corporation as a 'coalition', is insightful for two reasons.

First, this metaphor incorporates the understanding that a variety of parties have a legitimate vested interest in the modern corporation. Kaysen (1957) refers to this type of entity as the '*soulful corporation*' whose behaviour can be summarized in terms of its three primary objectives; i) to ensure the security and permanence of the corporation, ii) to pass on benefits to all members of the institution, and iii) to pass on benefits to the general public.

Second, in less normative and more positive terms, the 'coalition' metaphor suggests that parties external, or internal to the corporation play an important role in establishing the corporation's objectives (Bourgeois, 1980; Cyert & March, 1963; Dill, 1958; Galbraith, 1952; Mintzberg, 1983; Pfeffer & Salancik, 1978; Thompson, 1967).

In Barnard's (1938) terms, sufficient inducements must be made available to the pluralistic organizational coalition members in order to secure their necessary contribution. Further, the work of Emerson (1962) and Thompson (1967) suggests that corporations will alter their objectives in such a way that is consistent with the power relationship which they are a party to. For instance, Pfeffer (1972) found that corporate boards of directors closely matched the environmental demands placed on the corporation.

Table 3

The Organizational Model of the Corporation

The Corporation As....	A Coalition of Vested Interests
Key Actors...	The 'Coalition'
Key Focus...	The 'Bargain'
	Distribution of Proceeds & Allocation of Rights and Responsibilities
On Strategy...	A Product of Coalition Formation and the Need to Manage Key Contingencies

The Function of the Executive & Standards of Efficacy

In this view of the corporation, the executive is an agent of the relationship itself (Leblebici & Salancik, 1989). The executive may be viewed as the 'architect of purpose' (Andrews, 1971) for the corporation and is constrained by the need to balance the pluralistic claims of others with a vested interest in the enterprise. In Mintzberg's (1979) words, the corporation's top executives, or its 'strategic apex' is...

'...charged with ensuring that the organization serves its mission in an effective way, and also that it serves the needs of those people who control, or otherwise have power over the organization.' (p. 25)

As the corporation is viewed as having an intrinsic value superordinate to any one constituency, organizational performance is evaluated in terms conservation goals (Simon, 1945) such as survival (Pfeffer & Salancik, 1978; Yuchtman & Seashore, 1967), long-term growth (Penrose, 1959), stability and profitability (Chandler, 1962, 1977) as well as other 'effectiveness' criteria (Connolly, Conlon & Deutch, 1980; Friedlander & Pickle, 1968).

As such, the view of the corporation as a coalition of vested interests provides another useful perspective on corporate governance by highlighting its political and social dimensions.

2.3.1 Corporate Governance Implications

Key Actors, Key Focus, Strategy Implications

An organizational perspective on corporate governance can be constructed around Pfeffer and Salancik's (1978) notion that firms are essentially 'markets for influence' where a broad array of interested parties vie for influence and control. Consistent with this view, McGuire (1990a) offers the following definition of corporate governance;

'.....[G]overnance is a broad concept which includes the allocation of the rights, responsibilities, and benefits of association with an organization. It also includes the informal processes (eg. politics) used by individuals to pursue self-interest within these formal systems.'
(p. 3)

A particularly useful aspect of the organizational perspective is that it considers the informal processes that give rise to the distribution of rights, responsibilities, and benefices. This view emphasizes the fact that the external environment of a corporation is essentially a social construction (Pfeffer & Salancik, 1978) which is enacted, or continuously defined and redefined (Weik, 1979) by individuals and groups of human actors. As such, the external forces that constrain corporate behaviour may be moderated (elevated, or attenuated) through political activity (Pfeffer & Salancik, 1978) such as lobbying, or the formation of inter-organizational alliances.

Further, the organizational perspective highlights that political dynamics both within and outside the corporation

shape organizational outcomes (Cyert & March, 1963; Mintzberg, 1983). In this regard, by emphasizing the relationship between shareholders, managers, and corporate boards of directors, both the economic and legal perspectives of corporate governance underspecify intra-organizational dynamics that give rise to corporate outcomes.

In fact, a large body of literature suggests that aside from powerful external stakeholders (Porter, 1980; Thompson, 1967), internal stakeholders such as middle-level management (Bower, 1970), lower level employees (Mechanic, 1962) as well as intra-organizational processes (Mintzberg & McHugh, 1985; Peters & Waterman, 1982; Quinn, 1980) have a greater influence on corporate outcomes than is specified in the economic and legal perspectives of corporate governance.

2.3.2 The Limitations of the Organizational Model

While the organizational model offers a rich theoretical framework which can be used to highlight the intra-organizational, socio-political dynamics of corporate governance, it does so at the expense of simplicity, measurability and parsimony. As noted above, one of the chief contributions of the agency model is that it frames the political struggle between owners and managers in economic terms which are relatively easy to model and empirically evaluate.

On the other hand, the organizational model's 'thicker'

(Geertz, 1973) description of corporate governance processes is much more difficult to operationalize and empirically evaluate. In the tradition of 'normal science' (Kuhn, 1972), the agency model makes simplifying assumptions which permit the modelling of corporate governance dynamics. The organizational model makes few similar concessions.

2.3.3 The Contribution of the Organizational Model

Notwithstanding the practical difficulties associated with modelling the corporate governance implications of the organizational model, this perspective offers two major insights which can contribute to our understanding of corporate governance dynamics.

First, the organizational model affords researchers a means of opening up the 'black box' that logically relates ownership structure to performance outcomes. That is, the organizational model provides a theoretical basis which accounts for the socio-political processes that give rise to both corporate strategy and performance outcomes.

Second, the organizational model highlights the fact that the genesis of firm strategy and performance may not be reducible to tensions emanating from the divergence of interests inherent in the managers-shareholder, principal-agent relationship.

Indeed, as noted above, implicit in the work of such notable organizational theorists as Barnard (1938), March and

Simon (1958) and Thompson (1967) is the notion that organizations are multi-lateral systems of exchange. Pfeffer and Salancik's (1978) 'markets for influence' metaphor highlights the fact that a varied set of interest groups may exert influence over corporate strategic decisions and performance outcomes.

While the agency model draws our attention to the fact that strategic decisions are not neutral in terms of their impact upon the interests of shareholders and managers, the organizational model considers the strategic and performance consequences of goal incongruity among a more diverse and pluralistic set of stakeholders.

2.4 Synthesizing the Perspectives: Alternatives, or Complements?

Throughout this chapter, three perspectives on corporate governance have been highlighted which stem from alternative normative assumptions regarding the essence of the modern corporation. Indeed, the basic assumptions of the three perspectives outlined here differ considerably (Tables 4 and 5).

The agency model is based upon the notion that the corporate form of organization is essentially a goal attainment device for the advancement of shareholder interests. As such, management's basic task is to act as an agent for their shareholders and to pursue policies that maximize their return.

Table 4

Alternative Perspectives on The Nature of the Corporation

The Corporation As....	A Creature of the State	A Goal Attainment Device of the Shareholders	A Coalition of Vested Interests
On the Nature of the Corporation...	<p>The corporation has been vested with certain attributes by the state.</p> <p>A pragmatic response to problems inherent in large scale economic enterprise.</p> <p>The corporation only has rights which the state permits.</p>	<p>Corporations are subordinate to the interests of its owners (shareholders).</p> <p>The corporation is a tool for the advancement of shareholders' interests.</p> <p>The corporation does not have an independent existence apart from its owners.</p>	<p>Corporations are superordinate entities.</p> <p>A variety of parties have a legitimate vested interest in the corporation's activities.</p> <p>Corporations are social systems ...responsive, adaptive organisms.</p>
On the function of the Executive...	<p>The corporation is an agent of the state.</p> <p>The executive is an agent of the corporation.</p>	<p>The executive is an agent of its owners (shareholders).</p> <p>The executive should adopt policies consistent with the maximization of shareholder wealth.</p>	<p>The executive is an agent of the relationship.</p> <p>The executive must balance the pluralistic claims of those with a vested interest in the corporation in order to secure their required contribution.</p>
Standards of Efficacy	<p>Social Welfare Efficiency Allocative Equity</p>	<p>Profitability (esp. share price) Economic Efficiency</p>	<p>Survival Long-term growth, stability and profitability. Effectiveness</p>

Table 5

The Strategy and Corporate Governance Implications of The Alternative Perspectives

	The Economic View	The Legal View	The Organizational View
The Corporation As....	A Goal Attainment Device	A Creature of the State	A Coalition of Vested Interests
Key Actors...	Managers and Shareholders	The State, Managers & Directors	The 'Coalition'
Key Focus...	The Relationship Between Managers & Shareholders Distribution of Proceeds	Fiduciary Responsibilities of Managers & Directors Allocation of Rights & Responsibilities	The 'Bargain' Distribution of Proceeds Allocation of Rights & Responsibilities
On Strategy...	Tensions between Managers and Shareholders	Rationally Formulated by Managers & Rationally Ratified by Directors	A Product of Coalition Formation and the Need to Manage Key Contingencies

Given this basic view of the corporation, it is not surprising that the agency perspective of corporate governance focuses in on tensions and divergences of interests in the relationship between managers and shareholders, rather than the relationship between a broader array of organizational stakeholders.

The base hypothesis in the legal perspective is that the corporate form of organization is essentially a creature of the state, which has been vested with certain attributes in order to facilitate large scale economic undertakings. As such, managerial and corporate activities are assessed from a social perspective, in terms of the corporation's success in generating and allocating wealth. Given its societal-level focus, the legal perspective emphasizes the corporate governance ramifications of the formal (eg. tax laws), quasi-formal (eg. general operating procedures) and informal (eg. norms of business conduct) working rules, that regulate the relationship between the corporation and various stakeholders.

In contrast to the agency and legal perspectives, the organizational perspective does not view the corporation as a tool for the advancement of either shareholder, or society's interests. Rather, the organizational perspective views the corporation as a coalition of vested interests, an important social institution in its own right. As such, the organizational perspective sees management as an agent for the corporation itself, rather than as an agent for any particular

stakeholder. Accordingly, organizational effectiveness is assessed in terms of the corporation's ability to satisfy a diverse range of stakeholders whose joint contributions are necessary for its continued viability as a going concern.

The agency, legal and organizational perspectives of corporate governance stem from different disciplines, traditions and basic assumptions regarding the essential nature of the corporate form of organization. Consequently, these perspectives also differ in terms of the role they ascribe to management and the standards by which organizational performance is evaluated.

At a normative level, these perspectives seem very much alternative, rather than complementary conceptions of corporate governance. Still, important aspects of the agency, legal and organizational models of corporate governance suggest that these perspectives offer complementary insights which may be integrated into a common positive model of corporate governance (Table 6).

In particular, both the agency and organizational models explicate the causes and consequences of divergent interests between classes of stakeholders. That is, both the agency and organizational models are essentially political views of corporate governance as they attribute corporate strategy and performance outcomes to inherent tensions between stakeholders. While the agency perspective facilitates the modelling and evaluation of the tensions between stakeholders

Table 6
The Three Perspectives Compared

	The Economic View	The Legal View	The Organizational View
Causes of Tension Between Stakeholders...	Primarily Economic Conflicts of Interest	Not Specified	Economic and Social Conflicts of Interest
Modelability...	Fairly Easy	Very Difficult	Difficult
Number of Stakeholders Considered...	Few, Usually only Owners and Managers	A Diverse Set	A Diverse Set
Loc of Analysis...	Bilateral, Principal-Agent Relationships	Macro, Social-Level Focus	Multilateral, Organizational-Level Focus
Key Contribution to Corporate Governance...	Focus on Economic Tensions and Few Stakeholders Facilitates Statistical Modelling	Focus on Institutional Arrangements Provides a Contextual Reference	Focus on a Diverse Set of Stakeholders. Highlights that Organizations are Nexuses of Economic and Social Exchange

by framing areas of goal divergence in economic terms, this perspective offers a restricted view of organizational stakeholders by focusing almost exclusively on the manager-shareholder relationship.

On the other hand, the organizational perspective considers a much more comprehensive set of stakeholders, but is difficult to model.

Similarly, while the legal perspective underspecifies corporate governance processes by virtue of its macro-level focus on institutional arrangements, this perspective serves as a useful complement to agency and organizational views by highlighting the importance of considering the context in which relationships between stakeholders are embedded. Indeed, one of most frequently cited criticisms of agency theory is its implicit context neutrality.

The organizational model provides a contextual reference for the agency perspective by highlighting the fact that the manager-shareholder relationship is embedded in the much broader nexus of stakeholder relations. Further, the legal model provides a contextual reference for both agency and organizational models by highlighting the influence working rules have on the relationship between various organizational stakeholders.

In summary, despite their divergent normative bases, each of the three perspectives discussed in this chapter offers a unique and valuable contribution to our understanding of

corporate governance. Each of the perspectives on corporate governance focuses our attention at a different level of analysis. The agency model focuses on the manager-shareholder relationship. The organizational model uses the organization as its unit of analysis. The legal model considers social-level issues.

In the following chapter, a research model is described which incorporates insights from each of the agency, legal and organizational perspectives. In formulating and discussing research hypotheses, it is shown how combining considerations from each perspective yields more refined hypotheses. That is, by integrating insights from the three perspectives, we can get a finer grained understanding of the relationship between ownership concentration, corporate strategy and firm performance.

CHAPTER 3

The Research Model and Hypotheses

The research model depicted in Figure 3 integrates insights from the agency, legal and organizational models discussed in Chapter 2. The model also constitutes a pictorial representation of the three research questions outlined in Chapter 1.

In Section 3.1 (A-F), the research model is disaggregated into 5 subsets and the theoretical and practical relevance of each constituent subset is discussed.

In Sections 3.2(A-C), testable hypotheses are incrementally developed by incorporating insights from the legal and organizational perspectives into the mainstream agency theory perspective of corporate governance.

Some concluding and summary comments on the research model and hypotheses are offered in Section 3.3.

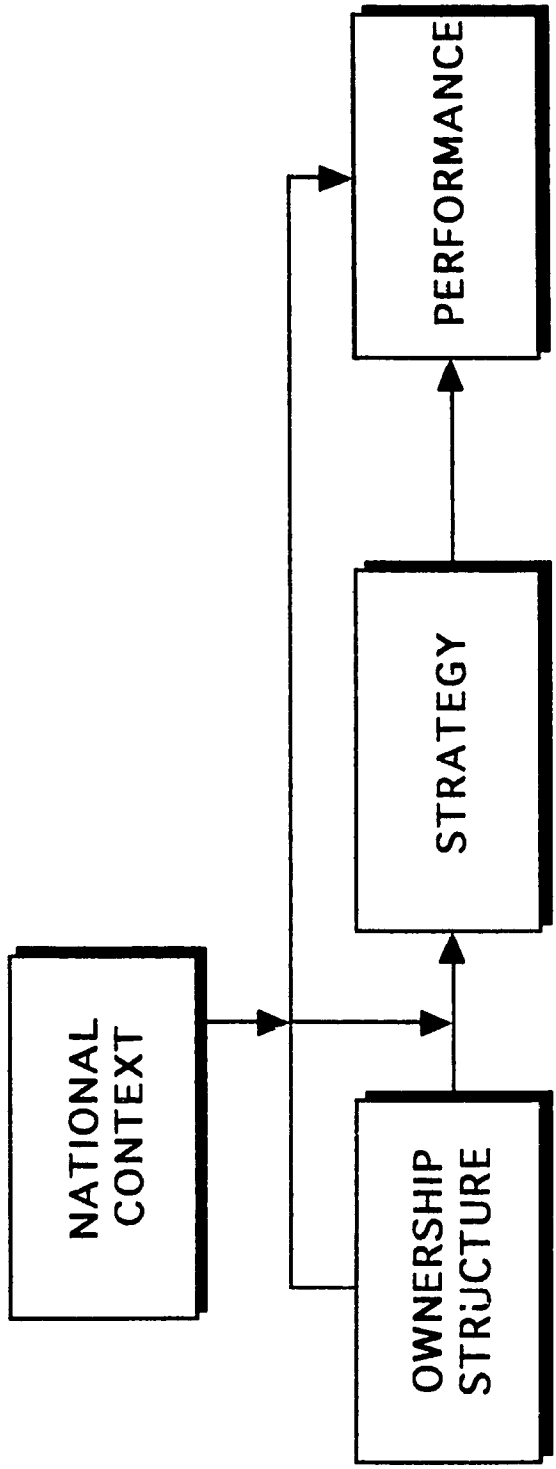


FIGURE 3: The Research Model

3.1 The Theoretical Basis For the Relationships Portrayed in the Research Model

A. The Ownership Concentration-Performance Relationship

The relationship between ownership concentration and financial performance is of central importance to the study of corporate governance. Indeed, as recounted earlier, the ownership concentration-performance relationship has been the subject of much empirical study ever since Berle and Means (1932) first advanced their separation of ownership and control thesis.

Unfortunately, as noted earlier, empirical support for the ownership concentration-performance relationship is largely mixed and inconclusive. Some studies have found the hypothesized positive relationship between ownership concentration and performance. Others have found a negative relationship. Still others have found no significant ownership concentration-performance relationship at all.

The ownership concentration-performance relationship is tested here because the current inconclusive state of the literature is such that it is felt *a priori* assumptions of one kind, or another are untenable. Indeed, by testing other components of the research model, it is hoped that this study will identify some contingency factors which can explain the diversity of findings which punctuate the corporate governance literature on this central issue.

B. The Ownership Concentration-Performance Moderated By National Context Relationship

One possible contingency factor that may be useful in improving our understanding of the relationship between ownership concentration and performance is national context. Indeed, since most studies of the ownership concentration-performance relationship have been conducted on U.S. firms, it is critical from a research, investor, managerial and public policy perspective to evaluate the extent to which findings are generalizable outside that context.

National contexts differ profoundly in terms of their '*working rules*' (Commons, 1924). Working rules are those meta structures which social systems use to pattern economic exchange. They are the '*rules of the game*' which are necessary to allow for stable patterns of exchange (Gouldner, 1960; Leblebici, 1985; Ouchi, 1980). Such working rules include corporate law, labour law, regulation, accounting standards and norms of business conducts.

These working rules might logically moderate the ownership concentration-performance relationship. The importance of specific working rules on corporate governance patterns within a given national context are discussed in (D) below.

C. The Ownership Concentration-Strategy Relationship

Historically, the vast majority of research in corporate governance has focused on the ownership concentration-

performance relationship (eg. Baumol, 1959; Berle & Means, 1932; Capon et al, 1990; Demsetz & Lehn, 1985). The more recent trend spearheaded by research in the strategic management literature has been to focus on the question of how ownership concentration influences corporate strategy.

Unfortunately, research on the ownership concentration-strategy relationship is still at a very early stage of development. Limited research has been conducted examining particular dimensions of strategic outcomes such as corporate growth, diversification and R&D intensity. However, the literature is silent with respect to many other strategic outcomes on which managerial and ownership interests might diverge.

This study will both re-examine certain previously examined relationships with the intent of explaining some inconsistent findings and consider some previously unstudied strategic dimensions on which the interests of owners and managers might logically diverge.

For instance, economists have argued that managers pursue growth (Baumol, 1959; Marris, 1964) and diversification (Amihud & Lev, 1981) strategies in large part to mitigate their firm-specific income risk. It has been argued that such a practice amounts to a risk reduction perquisite at the expense of diversified shareholders who are indifferent to firm-specific risk. Given the fact that diversification (Rugman, 1981) and growth (Pearce, 1983b) have both product-

market and geographic dimensions, this study examines the relationship between ownership concentration and geographic scope.

To the end of addressing some of the gaps in our understanding of the ownership concentration-strategy relationship, this study will also examine the impact of ownership concentration on capital expenditures, dividend policies and financial leverage.

D. The Ownership Concentration-Strategy Moderated By National Context Relationship

In his recent book The Competitive Advantage of Nations, Michael Porter (1990) highlights the interactive effect that ownership concentration and national context have on corporate strategy. Indeed, he contends that,

'Company goals are most strongly determined by ownership structure, the motivation of owners and holders of debt, the nature of the corporate governance, and the incentive processes that shape the motivation of senior managers. The goals of publicly held corporations reflect the characteristics of the nation's capital markets.'
(p. 110)

Among the factors cited by Porter as being important determinants of corporate strategy include; the identity and disposition of major shareholders, corporate taxation policies, merger policy, disclosure requirements and norms pertaining to executive compensation. Porter's insights highlight some of the key working rules that affect corporate governance processes within a given national context.

In the following sub-sections, some of the most important cross-national differences are described.

The Ownership of Firms

In the U.S. and the U.K., corporate stocks are widely held.

In contrast, stocks in Canadian companies are tightly held. Of the 400 largest Canadian companies, 382 are controlled by a single shareholder (Price Waterhouse, 1989a).

The French government still retains ownership positions in several of that country's key sectors.

German banks control a large part of the German economy. German banks typically hold both large debt and equity positions in that nation's largest corporations. The influence of German banks is augmented by the fact that shareholders typically deposit their shares with these financial institutions. The banks collect dividends for the individual investor, and are given the shareholder's proxy.

Disclosure Requirements

Far and away, the U.S. has the most comprehensive set of disclosure requirements for its publicly traded corporations. U.S. corporations are required to file annual 10K reports with the securities and exchange commission (SEC). These 10K reports must contain audited financial statements, a listing of all institutional, insider and 5% owners, as well as the

changes in their equity positions. As well, corporations must list the salaries of their 5 highest paid corporate officers. U.S. corporations must also make public less detailed quarterly reports.

The U.K., France and Canada also have quite comprehensive disclosure requirements. German disclosure requirements are rather lax and lag far behind other western nations in this regard (Euromoney, 1990; Price Waterhouse, 1988, 1989a, 1989b, 1990, 1991a).

Capital Structure and the Payment of Dividends

Corporations in Canada, France, Germany, the U.K. and the U.S. are permitted to issue multiple classes of common and preferred shares as well as bonds and debentures.

In Canada and the U.S., firms may issue dividends as long as the payment of dividends does not leave the corporation in a state of insolvency.

In contrast, in the U.K., France and Germany, dividends may not exceed the sum of a company's net income for a given year, plus its accumulated surplus. In Germany, managers may transfer funds into a capital fund which effectively reduces the stock of cash available for the payment of dividends.

Corporate Taxation

German profits are taxed differentially depending on whether they are retained for company purposes, or disbursed

to shareholders. Retained earnings are taxed at a 50% rate. Disbursed earnings are subject to both a 36% tax rate, and a 25% withholding tax.

In recent years, there has been a tendency towards the use of debt financing in most countries because tax systems typically permit the deductibility of interest expenses. As a consequence, the greater use of debt results in a lower after tax cost of capital. This trend has been especially pronounced in Germany and the U.S.

Merger Policy

U.S. anti-trust regulation has traditionally curtailed horizontal merger activity in that country. Consequently, most U.S. mergers have been unrelated in nature. In contrast, the Canadian government has taken a much more laissez faire position on horizontal mergers.

Legislation is on the books in most countries which permits authorities to review and prohibit mergers. The powers of the French government are especially sweeping in this regard.

In Canada and France, mergers which involve foreign entities taking over a domestic concern may be subject to special reviews.

The Role and Responsibility of the Board of Directors

In the U.S. and Canada, the board of directors constitutes the supreme managerial body and is vested with the ultimate authority over a company's affairs. In theory, these boards are elected directly by shareholders, but in practise nominations made by the current board are almost always approved (Vance, 1983).

In the U.S., corporate boards must contain a certain percentage of 'outsiders.' German and French boards are more collegial and less supervisory in orientation than their North American counterparts. They are designed to assist managers, rather than to monitor them. In these countries, corporate officers may only be removed by a direct vote of shareholders.

In Germany, between 1/3 and 1/2 of a company's directors are appointed by employees, or trade unions. Consequently, only a bare minimum of directors of German companies are elected by its shareholders.

In most instances, corporate boards are vested with the responsibility of representing the interests of shareholders. Three notable exceptions in this regard include Germany with its employee appointed directors, U.K. directors who are required to represent both the interests of shareholders and employees and U.S. directors whose direct legal responsibility is to the corporation as a going concern, rather than any particular stakeholder (Clark, 1985).

Although under normal circumstances, directors and

officers are not liable for corporate actions. The trend in international corporate governance appears to be towards making directors and officers directly accountable for corporate actions. France is at the vanguard of this trend.

Executive Compensation

The salaries of U.S. C.E.O.'s dwarf their counterparts in Canada and Europe (Figure 4). The average total remuneration paid to U.S. C.E.O.'s of companies capitalized in excess of \$200M US is about \$750K. In contrast, comparable C.E.O.'s in Canada, France, Germany and the U.K. receive an average of about \$400K in total remuneration (Economist, 1992).

Another striking feature of executive compensation in the U.S. relates to the importance placed on long-term incentives such as stock options (Figure 5). In the U.S., long-term incentives account for roughly 28% of a C.E.O.'s remuneration package. The long-term incentive component of Canadian, French and British executive pay is considerably less (circa 10-15%). In direct contrast to U.S. executive pay practises, German C.E.O.'s are rarely remunerated on the basis of long-term incentives.

Clearly, there are substantial differences in cross-national corporate governance related working rules. These divergencies might logically moderate the ownership concentration-strategy-performance relationship. This understanding highlights the importance of considering

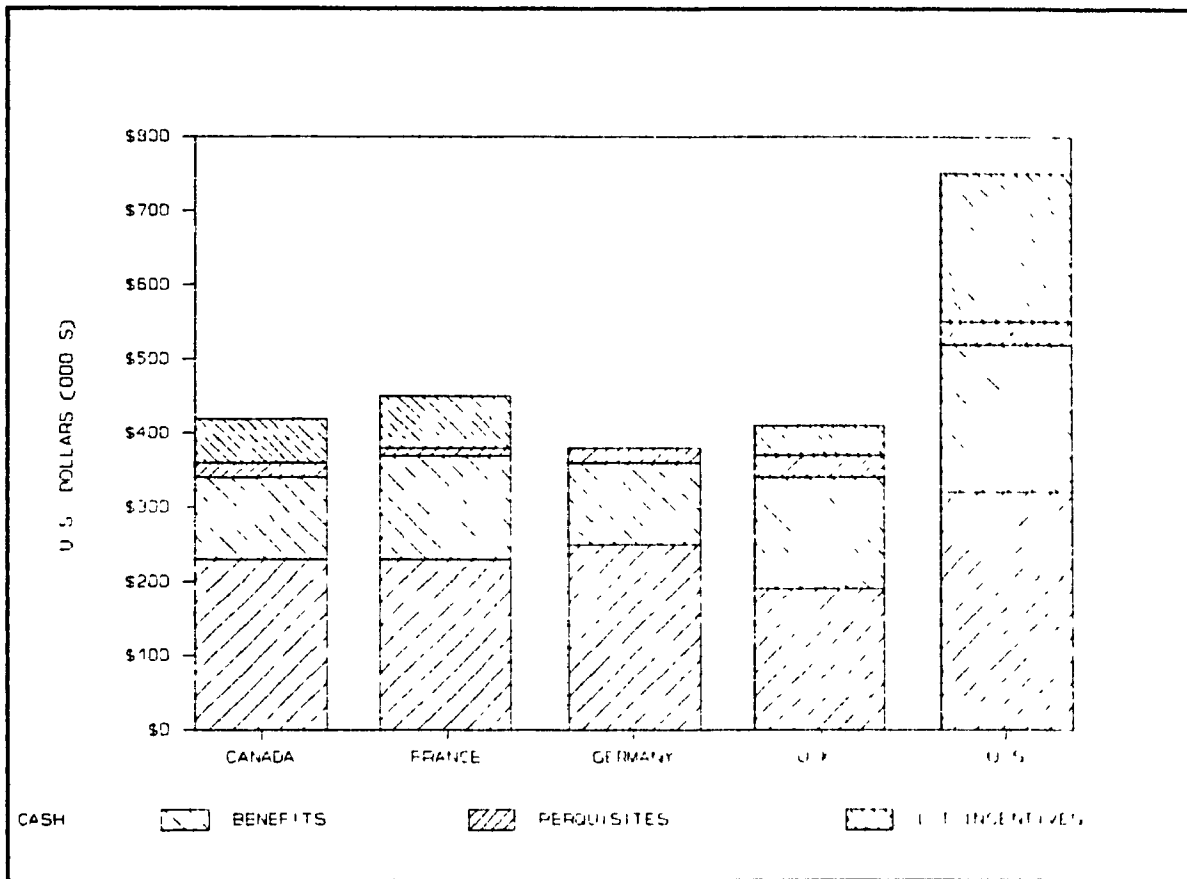


Figure 4: Top Executive Compensation In 5 Countries (Source: The Economist, 1992)

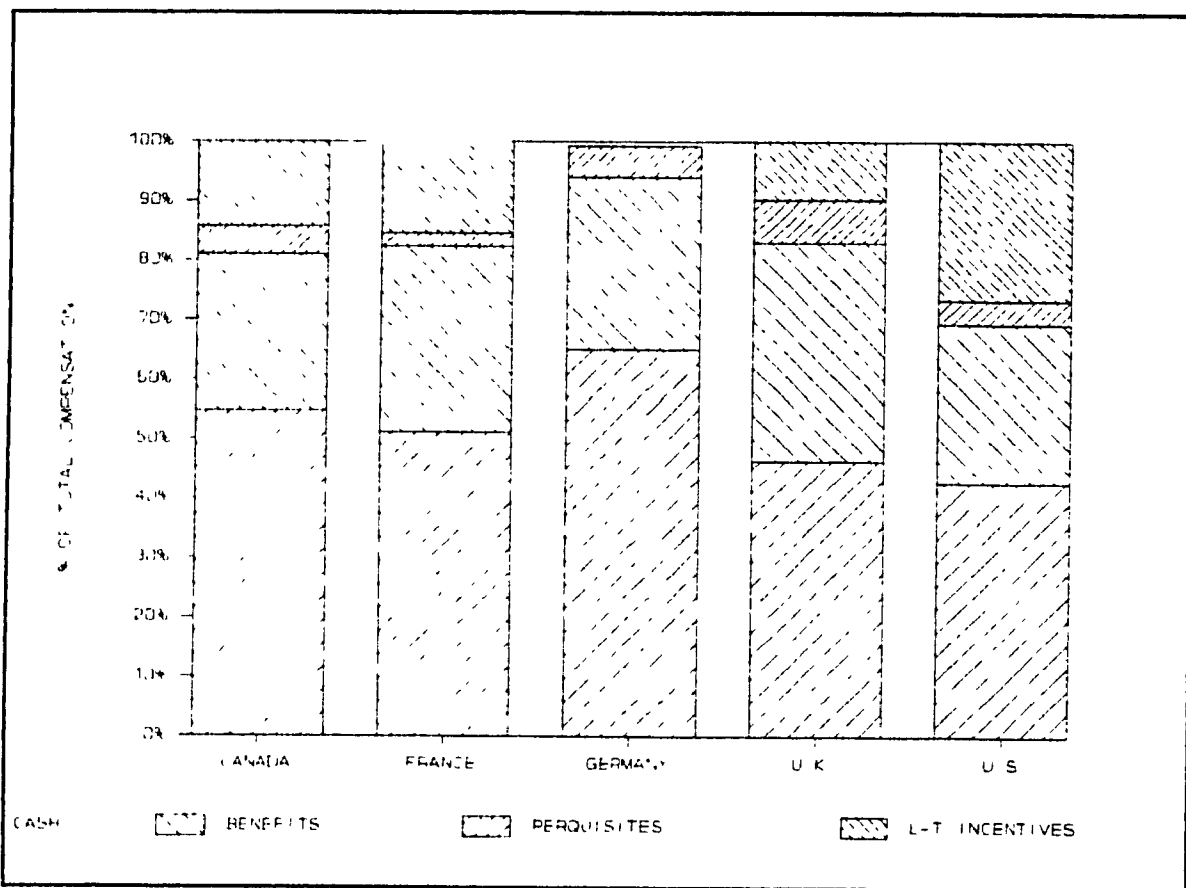


Figure 5: Top Executive Compensation In 5 Countries (% Breakdown)
 (Source: The Economist 1992)

national context in the study of corporate governance. Specifically, the corporate governance related working rules described above provide a useful basis for understanding the moderating effect of national context.

The preceding discussion suggests that agency relations may vary across countries. As a result, concentrated ownership (and its implications regarding shareholder-manager conflict) may mean different things and give rise to different strategic and performance outcomes across national contexts.

E. The Ownership Concentration-Strategy Performance Relationship

As discussed earlier, much of both agency theory and strategic management is based upon the fundamental assumption that in a great many cases managers have a broad scope of discretion. Consequently, both these bodies of knowledge make the important assumption that the strategic decisions of top management play a pivotal role in the determination of corporate financial performance (eg. Andrews, 1971; Ansoff, 1965; Fama & Jensen, 1983; Jensen & Meckling, 1976).

Consistent with both agency and strategic management assumptions, it is hypothesized that strategy mediates the relationship between ownership concentration and performance. In other words, the relationship between ownership concentration and firm performance is an indirect one.

Almost all other empirical studies of corporate governance have either modelled financial performance as a

direct function of a firm's ownership regime (ie. the ownership concentration-performance link), or focused their analyses on intermediary ownership concentration and strategy relationships.

Studies of the first sort can demonstrate that ownership concentration influences performance, but they are unable to account for the processes which underlie this relationship.

Studies of the second sort may demonstrate that ownership concentration influences certain strategic decisions, but fail to empirically establish whether the observed strategy differences materially affect performance outcomes.

To date, only one other study has modelled the relationship between ownership concentration, strategy and performance in a similar manner. In a path breaking study, Hill and Snell (1988), found that strategy did mediate the relationship between ownership concentration and firm performance.

Notwithstanding the significant contribution of Hill and Snell, certain features of their study leave the generalizability of their findings in doubt.

First, their sample size was rather small. It was comprised of only 94 U.S. Fortune 500 firms and was cross-sectional, using data from the 1980 fiscal year (a recessionary year). Given the profound changes in corporate governance that have marked the 1980's (eg. LBO's, executive severance packages, changes in SEC disclosure requirements,

and changes in statutes pertaining to the composition of boards of directors), it is difficult to assess Hill and Snell's findings in the current corporate governance context.

Second, their sample was highly restrictive. The sample was purposely drawn from five research-intensive industry groups, and as indicated by the authors themselves was not intended to be generalizable outside that frame of reference.

Third, strategy was measured along only two dimensions of strategic outcomes (R&D intensity, and diversification).

Fourth, performance was operationalized in terms of a single accounting based measure (ROA).

This study extends, elaborates and updates the pioneering work of Hill and Snell. This study uses more current pooled-cross-sectional data spanning the 1985-1990 time period. The sample size is significantly larger (ie. 1030 versus 94 firms).

As expanded upon below, a prime objective of this study is to examine the generalizability of corporate governance relationships from one context to another. To this end, a cross-section of industrial firms are examined rather than concentrating on one particular industrial sector. For similar purposes, the sample includes firms from five national contexts (ie. Canada, France, Germany, the United Kingdom and the United States).

In this study, both strategy and performance constructs are modelled more comprehensively. To this end, measures

pertaining to seven dimensions of strategic outcomes (corporate growth, geographic scope, diversification, R&D intensity, capital expenditures, dividend policies and financial leverage) are considered. For similar reasons, both accounting and market based measures of financial performance are employed.

3.2 Hypotheses

A. Ownership Concentration-Performance Hypotheses

The traditional agency theory view of corporate governance emanates from Berle and Means' (1932) separation of ownership and control thesis. A basic assumption underlying this perspective on corporate governance is that owners (shareholders) and managers have divergent interests. Consequently, in instances where the holdings of stockholders are too widely dispersed to effectively monitor their managerial agents, managers will pursue their own strategic agendas at the expense of shareholders.

On the other hand, owners with large shareholdings have both the incentive (Demsetz & Lehn, 1985) and wherewithal to monitor their agents (eg. the ability to elect corporate directors to act as watchdogs over their interests, the ability to disrupt corporate activities by selling their stake and depressing stock price etc...). As such, agency theory predicts that ownership concentration will be positively related to corporate financial performance.

Hypothesis 1A: Ownership concentration is positively related to corporate financial performance.

Indeed, the presumed positive association between ownership concentration and financial performance lies at the core of the agency theory conceptualization of corporate governance. Unfortunately, as noted in Chapter 2, empirical tests of the relationship between ownership concentration and financial performance are largely mixed and inconclusive.

These mixed findings suggest that the relationship between ownership concentration and firm performance may be more complex than is suggested in the basic separation of ownership and control formulation.

Property rights theorists contend that corporate financial performance is a function of the efficiency of capital, product and factor markets and the extent of competition rather than ownership concentration per se (eg. De Alessi, 1983; Demsetz, 1983).

The basic premise of the property rights argument is that efficient and competitive markets render agency problems related to the separation of ownership and control

irrelevant¹.

Insights from the organizational perspective also suggest that the discretion of managers may be overstated in the traditional separation of ownership and control conception of corporate governance. Dating from the writings of Chester Barnard (1938) organizational scholars have long stressed that the demands placed on the corporation and its management are more complex and pluralistic than is suggested in the separation of ownership and control conceptualization of corporate governance.

¹ Given the difficulties and expense of collecting corporate governance data, researchers (eg. Demsetz & Lehn, 1985; Hill & Snell, 1988, 1989; Mork, Shleifer & Vishny, 1988) have taken advantage of the availability of specialized data bases such as the one compiled in 1981 by Corporate Data Exchange (Corporate Data Exchange, 1981). As such, much of what we know about corporate governance is based upon data bases over 10 years old.

In the interim, the pace of globalization has increased in a secular trend, augmented disclosure requirements and advances in information technology have improved the efficiency of capital markets, and the market for corporate control has become a salient feature of the corporate governance scene. Taken together, these developments strongly support the property rights position that agency problems related to the separation of ownership and control are now largely irrelevant.

Table 7

**Agency Theory Hypothesized Relationships Between
Ownership Concentration and Financial Performance****(Hypothesis 1A)**

Country	Sign
Canada	0
France	0
Germany	0
U.K.	0
U.S.	0

According to the organizational view, firms may deviate from wealth maximizing policies because any of the diverse group of pluralistic parties has sufficient power over the firm to influence its behaviour (Pfeffer & Salancik, 1978) and goals (Dill, 1958; Emerson, 1962; Thompson, 1967) by virtue of the fact that they supply the firm with resources needed for its survival, or well being.

According to this view, firms deviate from shareholder wealth maximizing policies because they are at least partially constrained, influenced, or controlled by parties other than shareholders and managers. Consequently, many firms cannot be expected to act solely in the interests of shareholders, or managers.

Cyert and March's (1963) metaphor of the organization as a coalition suggests that parties external (eg. government, suppliers, creditors) and internal to the firm (eg. shareholders, owners, employees) play an important role in establishing its objectives. According to Cyert and March's behavioural theory of the firm, the personal goals of interested parties can be viewed as representing a series of independent constraints imposed on the organization by elements of the organizational coalition (p. 117). Because of the plurality of interests involved in the goal setting process (Braybrooke & Lindblom, 1963), organizational choice and goals are best viewed as negotiated outcomes (Cyert & March, 1963; Hirsch, 1975; Murray, 1978; Simon, 1945, 1964)

and the presence of contradictory goals within the coalition makes an assessment of organizational effectiveness problematic (Hall & Clark, 1980).

The varied personal aspirations of coalition members enter the decision model as fixed constraints. These constraints² might be the demands of Galbraith's (1952) 'big government, or organized 'labour', the bargaining power of buyers and suppliers (Porter, 1980), or the demands of capital (Jensen, 1988; Manne, 1964; Marris, 1964), or product markets (Palmer, 1973).

Consequently, the profit motive of shareholders is but one constraint within a network of constraints, and organizational activities reflect compromises made to secure the necessary joint participation of organizational members.

Two important corporate governance conclusions can be drawn from the organizational perspective.

First, like modern property rights theory, the organizational model suggests that the separation of ownership and control perspective often overstates the amount of

² An insightful formalization of this position is provided by Simon (1964) who likens corporate goal setting to a linear programming problem where some objective function is maximized subject to a series of constraints.

The constraining nature of personal, or sub-coalition motives and the negotiated nature of the goal setting process leads Simon (1964) to quip 'if you allow me to determine the constraints, I don't care who selects the optimization criterion.' Simon claims that the satisfaction of personal goals provides a necessary inducement for members to provide contributions to the organization (Barnard, 1938).

discretion managers have with which to pursue their own agendas at the expense of shareholders.

Second, the organizational perspective points out that the factors that limit managerial discretion extend beyond the competitiveness of product and factor markets and the efficiency of capital markets highlighted by property rights theorists. Managerial discretion may also be narrowed by the ability of a broad array of interested parties to influence both corporate strategy and performance (Thompson, 1967).

As such, both the organizational perspective and property rights theory suggest that the relationship between ownership concentration and corporate financial performance should be non-significant.

Insights from the legal perspective strongly suggest that national working rules (Commons, 1924) have an important impact upon the ownership concentration-performance relationship.

For instance, in the U.S. and the U.K., comprehensive disclosure requirements, relatively efficient capital markets, and an active market for corporate control are likely to be the institutional factors which effectively limit managers' ability to pursue their own agendas at the expense of shareholders. The status of German banks as both shareholder and creditor may perform the same function in that context. In France and Germany, powerful labour groups may pose effective constraints on managerialist behaviour. Given Canada's small,

open and export driven economy, the globalization of markets may be an especially powerful force in that context.

The preceding discussion suggests that institutional checks exist both within and between countries which render agency costs related to the separation of ownership and control immaterial.

Hypothesis 1B: Ownership concentration is unrelated to corporate financial performance in Canada, France, Germany, the U.K. and the U.S. (ie. all national contexts examined).

B. Ownership Concentration-Strategy Hypotheses

Corporate Growth

Insights from the agency perspective highlight how the interests of managers and shareholders may diverge over corporate growth strategies. That is, managers may have an incentive to maximize growth, rather than shareholder wealth (Baumol, 1959; Marris, 1964).

The growth-profitability trade-off was formalized in the 1960's by the seminal work of Marris (1964). According to Marris, growth within certain bounds is consistent with profit maximization in that favourable undertakings can be exploited. However, past a certain point it signifies that less favourable opportunities are being pursued, resulting first in diminishing marginal profitability, and if growth is pushed

Table 8

**Property Rights Hypothesized Relationships Between
Ownership Concentration and Financial Performance****(Hypothesis 1B)**

Country	Sign
Canada	0
France	0
Germany	0
U.K.	0
U.S.	0

too far, diminishing average profitability (Cubbin & Leech, 1986).

Agency theorists claim that the managerial incentive for growth may stem from a number of factors. Simon (1945) and Williamson (1964) both argue that in 'building empires' professional managers may derive non-material personal benefits of power and prestige by pursuing expansion strategies. Managers may also have a pecuniary incentive to value growth over profitability since executive pay is commonly a function of hierarchal positioning and span of control rather than organizational performance (Simon, 1957). Further, Jensen (1989) submits that middle level managers are frequently rewarded by promotion, rather than pay increases which results in a cultural bias favouring growth over profitability.

Taken together, these factors suggest that managers have a bias for growth which may not be in the best interests of shareholders.

Hypothesis 2A: There is a negative relationship between growth and ownership concentration.

Considerations from the organizational perspective suggest that for many stakeholders corporate growth is a desirable outcome in itself. Aside from managers, labour benefits from corporate growth as it implies increased and

more stable employment levels.

Communities and local and national governments may look upon growth as a desirable outcome because it implies favourable economic spin-offs. Suppliers may see corporate growth in a favourable light as it signifies a larger potential market for their products. Further, even certain major shareholders may view growth as a desirable end result because of the prestige associated with owning a large and growing company (Demsetz & Lehn, 1985).

Growth may also have additional strategic and organizational benefits. Growth may be a means of securing economies of scale, or scope (Porter, 1985) which can be the basis for a competitive advantage. Growth may also be favourable in that it allows firms to make more efficient use of 'lumpy-assets' (Penrose, 1959; Rubin, 1973; Wernerfelt, 1984). Growth may also have favourable human resource consequences. That is, employees may feel a sense of pride in working for a large and/or growing company. Further, growth implies that avenues for upward mobility exist for employees. As such, continued growth may be a requisite for rewarding and keeping key employees with a company.

The preceding discussion suggests that to a large number of stakeholders, corporate growth is a performance indicator in itself, rather than simply a strategic option. This suggests, that the influence of diversified shareholders may be mitigated somewhat by the influence other stakeholders have

over the corporation. This understanding coupled with the fact that both the potential for growth and the benefits associated with growth are largely industry and country-specific suggest that the relationship between corporate growth and ownership concentration is non-significant.

Hypothesis 2B: There is a non-significant relationship between growth and ownership concentration in Canada, France, Germany, the U.K., and the U.S. (ie. all countries studied).

Diversification

A fundamental premise of agency theory is that since investors can diversify their own portfolios, they do not benefit from diversification done at the firm level (Amihud & Lev, 1981).

Indeed, agency theorists argue that managers diversify in a conglomerate fashion in order to lessen their firm-specific (unsystematic) income risk. Since shareholders can diversify their risk more efficiently and cheaply by holding a balanced portfolio³, conglomerate diversification is seen as a method of appropriating a risk reduction executive perquisite at the

³ For instance, Foust and Dobrzynski (1992) have estimated that 52% of the shares outstanding in the U.S.'s largest 500 firms are held by institutions such as pension and investment funds. These types of shareholders typically hold an already widely diversified stake in many corporations (Dobrzynski, 1992).

Table 9
Hypothesized Relationships Between
Ownership Concentration and Corporate Growth
(Hypothesis 2B)

Country	Sign
Canada	0
France	0
Germany	0
U.K.	0
U.S.	0

expense of shareholders.

Boudreaux (1983) and Kamin and Ronen (1985) provide evidence which can be seen as being supportive of this interpretation. Both studies report that manager controlled firms have lower, but more stable profit levels than owner controlled firms over time.

Hypothesis 3A: There is a negative relationship between ownership concentration and corporate diversification.

Considerations from the legal and organizational perspectives generally support agency theory's hypothesized negative relationship between ownership concentration and corporate diversification.

Indeed, insights from the organizational perspective suggest that shareholder interests may be coincident with other important stakeholders as far as corporate diversification is concerned. As such, pressures from multiple stakeholders may complement the influence of shareholders in resisting corporate diversification.

For instance, powerful trade unions such as those found in the French and German contexts may discourage diversification. The skill profiles of many workers may be such that inter-industry mobility (particularly to industries sufficiently different to lessen firm specific risk) may be limited. Indeed, employees may equate diversification with

lack of commitment to the core industry. In particular, the employee elected directors of German firms may be effective in acting against diversification moves.

Other important stakeholders such as creditors, suppliers and customers may also perceive that diversification places unfavourable pressures on a firm's financial resources and managerial expertise. This view is consistent with a large body of research in strategic management (eg. Rumelt 1974, 1982) and industrial economics (eg. Caves, 1989; Scherer, 1989) which indicates that conglomerate diversification has negative performance ramifications.

The importance of family controlled corporations in Canada suggests that Canadian firms may be expected to exhibit a unique relationship between ownership concentration and corporate diversification. That is, research has shown that in large family run firms such as those that are so dominant a feature of the Canadian institutional context, profit maximization goals may be tempered by wealth conservation objectives (Fisher, 1989). If this is true, the wealth conservation objectives of Canadian owners could be well served by corporate diversification and that the influence of shareholders should complement the interests of managers instead of other stakeholders whose interests are not best served by corporate diversification.

The preceding discussion suggests the following hypothesis which is depicted Table 10.

Hypothesis 3B: There is a negative relationship between ownership concentration and diversification in France, Germany, the U.K. and the U.S., whereas the relationship is positive in Canada.

Geographic Scope

As noted in the work of Rugman (1981), diversification has both product-market and geographic dimensions⁴. As such, managers may seek to expand corporate activities to international markets as a means of diversifying their firm-specific risk.

As with conglomerate diversification, already diversified shareholders will not benefit from this sort of corporate level diversification. Thus, geographic scope may be another means by which managers extract what amounts to a risk reduction perquisite.

Large scale foreign operations may also exacerbate existing agency problems. For instance, foreign operations may be particularly difficult for shareholders to monitor and control. Thus, powerful shareholders may prefer more easily monitored domestic activities.

⁴ For instance, insurance companies typically diversify their portfolios by insuring property over a broad geographic space.

Table 10

**Hypothesized Relationships Between
Ownership Concentration and Diversification****(Hypothesis 3B)**

Country	Sign
Canada	+
France	-
Germany	-
U.K.	-
U.S.	-

Hypothesis 4A: There is a negative relationship between the internationality of operations and ownership concentration.

Considerations from the legal and organizational perspectives generally support the agency theory hypothesis of a negative relationship between the internationality of operations and ownership concentration. Employee groups are likely to strongly resist geographic expansion in that it has negative implications regarding domestic employment levels. As was the case with conglomerate diversification, the interests of shareholders and labour are coincident and may act interactively in forestalling international expansion.

As noted earlier, Canadian owners may be guided by wealth conservation, rather than wealth maximization objectives. If this is so, we would expect manager and shareholder interests to complement each other resulting in a positive association between the internationality of operations and ownership concentration.

Agency problems aside, the size of a domestic markets undoubtedly influences the motives behind internationalizing operations. In countries with small domestic markets internationalization may be required to achieve minimum efficient scale in production, whereas in other contexts, internationalization may be symptomatic of the agency problems discussed above. That is, internationalization may be a requisite in relatively small export driven economies such as

Canada and France, whereas it may be more of a strategic choice in larger economies such as the U.S.

Hypothesis 4B: There is a negative relationship between the internationality of operations and ownership concentration in Germany, the U.K, and the U.S., whereas the relationship is positive in Canada and France.

Research and Development Intensity

Two rival agency theory explanations offer contradictory testimony on the relationship between R&D expenditures and ownership concentration.

Hill and Snell (1988, 1989) hypothesize and find a positive relationship between R&D expenditures and ownership concentration. They contend that it is differences in the risk profiles of managers and shareholders which drive this positive relationship.

According to this view, R&D outlays are seen as an inherently risky corporate expenditure. As such, shareholders favour R&D intensive strategies since they can benefit from the high return from successful innovations while mitigating their downside risk by diversifying their portfolios. In contrast, managerial wealth is more closely tied to firm specific outcomes. As a consequence, risk averse managers prefer to spend less on R&D expenditures. Such a view is

Table 11

**Hypothesized Relationships Between
Ownership Concentration and Geographic Scope****(Hypothesis 4B)**

Country	Sign
Canada	+
France	+
Germany	-
U.K.	-
U.S.	-

consistent with research which suggests that managers pursue strategies which are designed to mitigate their exposure to unsystematic risk (eg. Amihud & Lev, 1981).

Another force driving a positive relationship between ownership concentration and R&D intensity may be risk shifting on the part of concentrated owners (Jensen & Meckling, 1976). That is, diversified shareholders may effectively shift risk to creditors by financing risky R&D projects through debt sources. Such a practice benefits shareholders who are well diversified, but negatively impacts upon debtholders whose return is contractually fixed (Harris & Raviv, 1991).

Hypothesis 5A: There is a positive relationship between ownership concentration and R&D expenditures.

While Hill and Snell contend that there is a positive relationship between R&D expenditures and ownership concentration, another view suggests exactly the opposite.

Grabowski and Mueller (1972) provide evidence suggesting that high levels of R&D expenditures are driven by managerial initiatives at the expense of shareholders. This view is based upon the notion that managers prefer to maximize growth rather than profits (Baumol, 1959; Marris, 1964).

That is, Grabowski and Mueller contend that since R&D expenditures are likely to be the investment activity which has the greatest long-run effect on corporate growth, it

should be favoured by managers. Further, Grabowski and Mueller contend that since technological leadership is an important prestige symbol in many management circles, it may be the recipient of corporate expenditures over which managers have discretion. Such a view is consistent with Williamson (1964) who contends that managers maximize a utility function which includes corporate growth and personal status.

Hypothesis 5B: There is a negative relationship between R&D expenditures and ownership concentration.

As reflected in the preceding discussion, two competing hypotheses exist pertaining to the relationship between R&D expenditures and ownership concentration. Each position has also been empirically validated. Further complicating matters are the results of a recent study by Baysinger et al (1991), who find that R&D intensity is unrelated to ownership concentration.

Considerations from the legal and organizational perspectives tend to support Grabowski and Mueller's hypothesized negative relationship for the U.S. context. As will be discussed below, the relationship between financial leverage and ownership concentration in the U.S. is likely positive and significant. Under pressure to make fixed debt payments, executives in highly levered firms may cut discretionary expenditures such as R&D expenses.

Indeed, pressures stemming from an active market for corporate control may compel U.S. managers to 'leverage-up' and manage their business for cash flow rather than long-term strategic reasons (Dobrzynski, 1988). In other national contexts such as France and Germany, pressures to lever from the market for corporate control may be less severe.

As noted by Demsetz and Lehn (1985), major shareholders may hold large blocks of shares because of the prestige associated with controlling high profile organizations. These shareholders may favour large R&D expenditures which promote the technological leadership of their company. Employees, community groups and suppliers may look favourably upon high levels of R&D expenditures for similar reasons. These latter stakeholders may also see R&D expenditures as a signal of a company's continued commitment to a particular line of business and/or community, or region. As such, pressures from these stakeholders may also have a positive effect on R&D expenditures.

The preceding discussion suggests that the relationship between R&D expenditures and ownership concentration may be positive in countries such as France and the U.K.

Other considerations may explain the relationship between R&D expenditures and ownership concentration in other countries. As previously noted, large Canadian shareholders may be more risk averse than their counterparts in other countries. That is, these shareholders may be guided by

motivations of wealth preservation. Given the risky nature of R&D expenditures, lower levels of R&D spending may be consistent with the objectives of these shareholders.

On the other hand, the joint role German banks play as shareholders and creditors may lessen the perceived riskiness of R&D expenditures to managers. As such, the relationship between R&D expenditures and ownership concentration is likely to be positive in Germany.

The preceding discussion suggests the following hypothesis which is depicted in the Table 12 below.

Hypothesis 5C: The relationship between R&D expenditures and ownership concentration is positive in France, Germany and the U.K., whereas the relationship is negative in Canada and the U.S.

Capital Expenditures

As was the case with R&D expenditures, Hill and Snell (1989) and Grabowski and Mueller (1972) offer contradictory explanations (and findings) regarding to the relationship between capital expenditures and ownership concentration.

Grabowski and Mueller find that the relationship between capital expenditures and ownership concentration is positive and significant. They offer an explanation which parallels their discussion of the relationship between R&D expenditures and ownership concentration. That is, Grabowski and Mueller

Table 12

**Hypothesized Relationships Between
Ownership Concentration and R&D Expenditures****(Hypothesis 5C)**

Country	Sign
Canada	-
France	+
Germany	+
U.K.	+
U.S.	-

argue that capital expenditures are discretionary and that managers will use them as a means of pursuing their growth and prestige objectives (Williamson, 1964).

Hypothesis 6A: There is a negative relationship between capital expenditures and ownership concentration.

On the other hand, Hill and Snell contend that production may be either capital, or labour intensive. According to this view, manager controlled firms tend to be more labour intensive because of the managerial tendency to empire-build (Simon, 1957). That is, Hill and Snell argue that since managers may derive power and status from controlling a large staff, they will tend to invest resources in staff over and above the levels required for efficient operations. Consequently, given resource constraints, managers will tend to underinvest in capital projects. In contrast, shareholder interests are better served by making capital investments which will improve the efficiency of company operations.

Hypothesis 6B: There is a positive relationship between capital expenditures and ownership concentration.

Considerations from the legal and organizational

perspectives suggest that the relationship between capital expenditures and ownership concentration should vary across countries.

While R&D and capital expenditures may both imply a future orientation, they are treated differently for accounting purposes. R&D expenditures are typically treated as an expense, do not appear on the balance sheet and are deducted from net income in the year in which they are incurred. On the other hand, capital expenditures are consolidated into the asset base of a company and are amortized over a period of years.

Another distinguishing feature of a capital expenditure relative to other sorts of discretionary expenses is that it represents an investment in a tangible item which can be easily monitored (evaluated). Notwithstanding problems of asset specificity (Williamson, 1985), investments in capital equipment also presumably have some salvage value.

These unique aspects of capital expenditures suggest that they may be favoured by shareholders. That is, the tangible nature of fixed assets means that capital expenditures may be more easily monitored than investments in human resources, or R&D projects. On the other hand, managers may prefer other sorts of expenditures which are more difficult to monitor. Moreover, since capital expenditures represent additions to a firm's asset base, they are likely to depress corporate return on assets in the short-term on which many executive bonuses

are based.

Another factor which may drive ownership preferences for capital expenditures are the asset substitution dynamics (Harris & Raviv, 1991) described below in relation to the association between leverage and ownership concentration. In short, large capital expenditures which are financed by debt sources may be a means of transferring risk from shareholders to creditors.

The preceding discussion supports Hill and Snell's (1989) contention that capital expenditures are positively related to ownership concentration.

However additional considerations suggest that in France and Germany the relationship between capital expenditures and ownership concentration is positive. In Germany, problems of asset substitution are less likely to occur since banks act as both shareholders and creditors. Ever since the Luddite destruction of English spinning looms during the industrial revolution, employees have feared that changes in production methods will eliminate their jobs. As such, the powerful trade unions of France and Germany may strongly oppose capital expenditures which may be seen as a profound threat to employment levels.

Hypothesis 6C: There is a positive relationship between capital expenditures and ownership concentration in Canada, the U.K. and the U.S., whereas the relationship is negative in France and Germany.

Dividend Payout Ratios

Two agency theory based arguments have been made regarding the relationship between ownership concentration and dividend payout ratios.

One view holds that the relationship between ownership concentration and payout ratios is positive. The positive relationship is expected because large shareholders are able to get managers to pay out 'free cash flow' (Jensen, 1989), or slack (Bourgeois, 1981; March & Simon, 1958) financial resources. According to this view, the depletion of slack limits the discretion of managers. That is, equity in the form of retained earnings acts as a 'cushion' which permits corporate inefficiencies to persist over time.

In contrast, the payment of surplus cash as dividends leverages the corporation. This leverage effectively acts as a 'sword' compelling managers to act efficiently lest they be forced into bankruptcy by creditors if the corporation cannot meet fixed debt payments.

Table 13

**Hypothesized Relationships Between
Ownership Concentration and Capital Expenditures****(Hypothesis 6C)**

Country	Sign
Canada	+
France	-
Germany	-
U.K.	+
U.S.	+

Hypothesis 7A: There is a positive relationship between dividend payout ratios and ownership concentration.

An alternative view on the relationship between dividend payout ratios and ownership concentration is offered by Harris and Raviv (1991). According to this view, concentrated owners are in a good position to monitor firm management. As a consequence, the misuse of free cash flow is less of a concern. Indeed, given that dividend payouts do little to enhance the value of the firm, large shareholders may prefer to forgo immediate payouts in favour of long term growth. Harris and Raviv's review of the literature supports this argument.

Hypothesis 7B: There is a negative relationship between dividend payout ratios and ownership concentration.

Considerations from the legal and organizational perspectives suggest that characteristics of key stakeholders and differences in national working rules may significantly impact upon the relationship between ownership concentration and dividend payout policies.

In the U.K. and the U.S., covenants protecting debtholders may severely restrict the depletion of financial

slack. That is, while the payment of dividends may benefit shareholders, depleted financial reserves may increase the likelihood of bankruptcy and consequently lessen the value of corporate debt. As such, given the ability of large shareholders to monitor their investment, the influence of debtholders may be another force favouring a negative relationship between ownership concentration and dividend payout ratios in the U.S. and U.K. context.

In contrast, since German banks typically hold a large debt and equity stake in that nation's corporations, conflict between debtholders and shareholders is less of a concern. In such a context, additional leverage might not significantly increase the likelihood of bankruptcy in that dividend payments can be used by banks to finance further lending to the corporation. Given, the favourable tax treatment of debt costs in Germany, this process may effectively lower a corporation's cost of capital. Moreover the existence of regulation in Germany pertaining to maximum dividend payouts may actually set expectations regarding dividends in much the same way highway speed limits in the U.S. often become the minimum expected speed. These considerations suggest that the relationship between ownership concentration and dividend payouts is positive in Germany.

In Canada, the identity and disposition of major shareholders may strongly influence the relationship between dividend payout ratios and ownership concentration. That is,

Canadian owners concerned with wealth conservation may favour high dividend payout ratios despite their ability to monitor free-cash flow. Further, the corporate empires of Canadian families are organized through an intricate web of holding companies, operating entities and cross-ownership (Corelli, 1992). As a result, family owned holding companies are almost exclusively dependent on their subsidiaries for cash flow. As such, ownership concentration may be expected to lead to higher payout ratios in the Canadian context.

In France, the relationship between dividend payout ratios and ownership concentration is likely to be driven by a number of considerations. First, as previously discussed, the relatively concentrated ownership stake of large shareholders characteristic of the French corporate governance landscape suggests that owners are in a good position to monitor management. As a consequence, problems of free cash flow are less likely to arise in this context.

Second, the powerful trade union movement in France may have a depressive effect on the payment of dividends. That is, trade unions may view large dividend payments as a threat to employment levels, because it signals that internal growth opportunities may be forgone. Further, the depletion of organizational slack associated with high dividend payout ratios suggests that employment levels may be more sensitive to the general business climate.

Third, policies of the French government may also play a

role in influencing dividend payout ratios. The French government has historically taken a more interventionist posture than its counterparts in other G-7 countries⁵. As such, government policies and moral persuasion used to promote reinvestment may also have a depressive effect on dividend payout ratios.

The preceding discussion reflected in the following hypothesis suggests that national context is likely to play an important role in moderating the relationship between dividend payout ratios and ownership concentration.

Hypothesis 7C: There is a negative relationship between dividend payout ratios and ownership concentration in France, the U.K. and the U.S., whereas the relationship is positive in Canada and Germany.

Financial Leverage

Two agency theory based explanations suggest that ownership concentration is positively related to a firm's

⁵ For instance, the waves of privatizations and nationalizations of French companies during the 1980's underscores the active role the French government plays in managing that country's economy (Estrin & Perotin, 1991). Further, during the recessionary period of the early 1980's Air France was compelled by the French government to increase employment in order to ease France's high unemployment rates. This initiative occurred at the same time that other world carriers were frantically cutting staff in the face of a sluggish economy, as well as high fuel prices and interest rates (Reed, 1986).

financial leverage.

The first argument suggests that shareholders will favour high debt levels because it limits the amount of free-cash available to managers which may be abused (Jensen, 1988). Further, it is argued that the existence of high leverage serves as an effective disciplining device for managers. That is, in the context of a highly levered firm, executives must manage the corporation efficiently in order to meet fixed debt schedules.

An asset substitution argument advanced by Harris and Raviv (1991) suggests that shareholders favour high levels of leverage as a means of transferring risk from themselves to debtholders. According to Harris and Raviv, conflicts between shareholders and debtholders arise because the debt contract gives shareholders an incentive to invest sub-optimally (Jensen & Meckling, 1976).

This occurs because interest rates paid to debtholders are fixed, but effective returns to shareholders are variable and may be above, or below the return to debtholders. Consequently, diversified shareholders who benefit from limited liability, stand to benefit from high risk strategies even if they are value decreasing. These sorts of investments effectively decrease the value of debt by increasing the risk borne by debtholders whose rate of return has been predetermined.

For example, Dobrzynski (1988) estimates that the LBO at

Table 14
Hypothesized Relationships Between
Ownership Concentration and Payout Ratios
(Hypothesis 7C)

Country	Sign
Canada	+
France	-
Germany	+
U.K.	-
U.S.	-

RJR Nabisco resulted in a wealth transfer of \$300M from debtholders to shareholders. In another instance, Federated Department Stores Inc.'s senior debt went from a rating of AA to B 'junk' after Robert Campeau's debt-financed takeover⁶.

Both the free-cash flow and asset substitution arguments suggest that ownership concentration will be positively associated with leverage⁷.

Hypothesis 8A: There is a positive relationship between financial leverage and ownership concentration.

Considerations from the legal and organizational perspectives suggest that national context moderates the relationship between leverage and ownership concentration.

The important role German banks play as both creditor and shareholder suggests that the problems of asset substitution

⁶ More recently, Marriot Corporation broke its Hotel and Food Services Management group away from its highly levered real estate holdings. This restructuring led to an increase in the value of Marriot shares, but saddles the Real Estate Group with \$2.9 billion in debt which it must service on revenues of \$1.7 billion.

⁷ Alternatively, creditors may limit their exposure to firms with concentrated ownership because of concerns that powerful shareholders are often in a good position to demand concessions and renegotiate terms (Aivazian & Callen, 1980). That is, aside from capital, large shareholders often provide intangible assets (eg. reputation, managerial acumen) which is not salvageable in the event of bankruptcy. Consequently, creditors may impose strict covenants, or otherwise limit their exposure to firms with concentrated ownership.

highlighted by Harris and Raviv (1991) should not occur in Germany. That is, the close relationship between creditors and shareholders mitigates the potential for large shareholders to pass risk onto corporate debtholders.

Notwithstanding the absence of asset substitution dynamics, a positive relationship between leverage and ownership concentration is expected in Germany because cooperation between shareholders and creditors may facilitate and promote the use of debt financing. That is, the added risk of bankruptcy associated with high leverage is mitigated somewhat because creditors are also shareholders. In such a context, high levels of debt financing can be a means of lowering a firm's cost of capital since interest expenses are tax deductible, while payments to shareholders typically are not.

In contrast, asset substitution dynamics may be a strong influence in driving an expected positive relationship between financial leverage and ownership concentration in the U.S. where the interests of shareholders and creditors are more divergent in matters related to capital structure.

In Canada, France and the U.K., the wide use of preferred and multiple classes of shares (Price Waterhouse, 1991b) with unequal voting rights is likely to lead to a negative relationship between leverage and ownership concentration. As noted by Hart (1988) the use of multiple classes of shares with unequal voting rights has important corporate governance

consequences.

For instance, in contexts where the use of preferred and multiple classes of stock are considered 'normal', dominant shareholders may prefer to use these securities as they permit them to raise share capital without significantly diluting their voting control over the corporation. In such a context, asset substitution strategies may be used by dominant shareholders against subordinate shareholders, rather than debtholders.

Hypothesis 8B: There is a positive relationship between leverage and ownership concentration in Germany and the U.S. whereas the relationship is negative in Canada, France, and the U.K.

C. Ownership Concentration-Strategy-Performance Hypotheses

As noted earlier, much of both agency theory and strategic management converge on the common belief that executives have a broad scope of discretion from which to set the strategic direction for their corporation. Further, these strategic choices made by managers are assumed to directly influence financial performance.

The basic point of divergence between agency theory and strategic management are the behavioural characteristics which they impute upon management. Agency theory portrays executives as 'self-serving' (Bentson, 1985; McGuire, 1990b)

Table 15

**Hypothesized Relationships Between
Ownership Concentration and Financial Leverage****(Hypothesis 8B)**

Country	Sign
Canada	-
France	-
Germany	+
U.K.	-
U.S.	+

managers who are rational and opportunistic utility maximizers that take advantage of information asymmetries to pursue policies and strategies that benefit only themselves. As a consequence, agency theory emphasizes the negative implications of the wide scope of discretion afforded top management.

Indeed, the dual thrusts of the agency theory approach to corporate governance research are to; 1) identify strategic issues on which managerial opportunism is likely to manifest itself, and 2) to prescribe mechanisms which constrain managers from exercising their discretion (Oviatt, 1988).

In contrast, research in strategic management imputes inherently different behavioural assumptions on management. Top executives are depicted as 'stewards' of the corporation who act in accordance with their fiduciary responsibilities to various stakeholders and the organization itself as a going concern. As such, strategic management highlights the positive consequences of managerial discretion. According to this view, top management requires sufficient discretion in order to act as an 'architect of purpose' for the corporation (Andrews, 1971). In this role, managers formulate strategies and policies which directly impact upon the financial performance of the firm.

Indeed, much of the research in strategic management is geared towards helping managers create favourable contextual niches (eg. through 'sustainable competitive advantages'

(Porter, 1985), or 'first-mover advantages' (Lieberman & Montgomery, 1988)) which affords them a broad scope of discretion.

As such, while agency theory examines means by which executive discretion may be constrained, strategic management emphasizes the means by which executive discretion may be broadened and exercised.

Despite their divergent foci, both agency theory and strategic management are based upon the notion that top management discretion is a persistent feature of the corporate governance landscape. Further, the existence of such discretion permits managers to establish policies and strategies which directly impact upon corporate financial performance.

As such, the presumed chain of events is that discretion, which is at least partly a function of the relative power of managers and shareholders (Cyert & March, 1963; Hill & Snell, 1988; Mintzberg, 1983), influences corporate strategy, which in turn influences corporate performance. Unfortunately, (with the notable exception of Hill & Snell, 1989 described above), corporate governance research has modelled only subsets of the ownership concentration-strategy-performance relationship.

That is, one group of studies has examined the relationship between ownership concentration and financial performance. These studies may demonstrate that ownership concentration and financial performance are related, but they

leave implicit the strategic processes which both agency theory and strategic management suggest mediate this relationship. Another group of studies has examined the relationship between ownership concentration and various strategic outcomes. These studies may demonstrate that ownership concentration is related to corporate strategy, but do not indicate that the ownership concentration-strategy association impacts upon corporate performance.

The design of these studies highlights a key limitation of previous corporate governance research. That is, in most empirical studies, the mediating role of strategy in the ownership concentration-performance relationship is implied, but not explicitly evaluated. Similarly, in other studies, the presumed performance consequences of ownership concentration-strategy relationships are not empirically evaluated. In order to address this limitation, the entire ownership concentration-strategy-performance relationship is empirically evaluated in this study. To this end, it is hypothesized that...

Hypothesis 9: Corporate strategy mediates the relationship between ownership concentration and financial performance.

Further, as implied by the legal perspective on corporate governance and detailed in the discussion of hypotheses 1-8, national contexts are marked by distinct configurations of working rules which are likely to impact upon both the ownership concentration-performance and ownership concentration-strategy relationships. As such, the ownership concentration-strategy-performance relationship is likely to be moderated by the institutional context in which it is embedded.

Hypothesis 10: National context moderates the ownership-strategy-performance relationship.

3.3 Summary

In Chapter 3, insights from the agency, legal and organizational perspectives of corporate governance discussed in Chapter 2 were integrated into a testable research model. The theoretical basis for the relationships depicted in the model was discussed and specific hypotheses relating ownership concentration to corporate strategy and performance were developed.

In developing these hypotheses, this chapter began by discussing the theoretical and empirical evidence from agency theory for each ownership concentration-performance and ownership concentration-strategy relationship. In doing so, hypotheses drawn from agency theory were developed (Table 16).

Table 16

Agency Theory: Hypothesized Relationships with Ownership Concentration

Dependent Variable	Sign
Financial Performance	+
Corporate Growth	-
Diversification	-
Geographic Scope	-
R&D Expenditures	?
Capital Expenditures	?
Payout Ratios	?
Financial Leverage	+

Table 17

A Summary of Hypothesized Relationships Across National Contexts

Dependent Variable	Canada	France	Germany	U.K.	U.S.
Financial Performance	0	0	0	0	0
Corporate Growth	0	0	0	0	0
Diversification	+	-	-	-	-
Geographic Scope	+	+	-	-	-
R&D Expenditures	-	+	+	+	-
Capital Expenditures	+	-	-	+	+
Payout Ratios	+	-	+	-	-
Financial Leverage	-	-	+	-	+

Subsequently, insights from the legal and organizational perspectives were weaved into the discussion of the relationship between ownership concentration, corporate strategy and firm performance. In doing so, more finely grained hypotheses were drawn which suggest that the ownership concentration-strategy and ownership concentration-performance relationship vary across national contexts (Table 17).

Further, this chapter discusses the causal chain of events suggested by both agency theory and strategic management which relates ownership concentration to corporate financial performance. In doing so, a limitation of the body of knowledge on corporate governance is highlighted.

That is, most research either does not empirically evaluate the strategic processes that underlie the ownership concentration-performance relationship, or does not test the performance ramifications of the ownership concentration-strategy relationship. To the end of empirically evaluating the entire ownership concentration-strategy-performance relationship, it is hypothesized that strategy mediates the relationship between ownership concentration and performance (Hypothesis 9).

Finally, in integrating insights from the legal and organizational perspectives on corporate governance, it is hypothesized that the ownership concentration-strategy-performance relationship is moderated by the institutional context in which it is embedded (Hypothesis 10).

CHAPTER 4

Methodology

In this Chapter, the methodological approach that is used to empirically evaluate the research model (Figure 3) and test the hypotheses (Tables 15 and 16) developed in Chapter 3 is detailed.

This is done by first discussing issues related to sample selection and data collection (Section 4.1). In Section 4.2, measurement issues are discussed and the measures used to operationalize ownership concentration, corporate financial performance and seven dimensions of strategic outcomes are described.

Finally, in Section 4.3, a 6-step analytical approach is described which is used to evaluate both the research model and the hypotheses developed in the previous chapter.

4.1 Sample Selection and Data Collection

The final sample consists of 1030 medium to large sized (minimum assets, US\$50 million) private sector Canadian, French, German, U.K. and U.S. firms operating in 11 representative industrial sectors. An alphabetical listing of

firms included in the final sample is provided in Appendix A. The sample is broken down by both country and industry in Table 18.

The original intent was to examine firms from each of the G-7 countries. However, after closer examination, Japanese firms were excluded from consideration owing to problems of data availability and because of the highly complex, secretive and idiosyncratic corporate governance processes of that country (New York Times Magazine, 1992). Unfortunately, sufficient data was unavailable on a large enough sample of Italian firms for them to be included in this study.

As noted in Table 18, U.S. firms make up 60.7% (625 firms) of the sample, followed by U.K. firms 12.9% (133), German firms 9.6% (99), Canadian firms 8.8% (91) and French firms 8.0% (82).

The large representation of U.S. firms in the sample may be attributable to three factors.

First, the large size of the U.S. economy suggests that more U.S. firms would meet the US \$50 million asset cut-off.

Second, the rigorous disclosure requirements imposed upon U.S. firms means that complete financial and ownership data is more likely to be available for those firms.

Finally, public sector ownership is more common in Canada, France, Germany, and the U.K. than it is in the U.S. Public sector firms are not considered here as the study's

Table 18

Sample Size Broken Down by Country and Industry*

	Canada	France	Germany	United Kingdom	United States	Row Total
AUTO	5	3	7	7	30	52
CHEM	4	7	13	11	63	98
CONS	10	18	13	23	63	127
ELEC	3	7	6	11	14	41
FOOD	5	14	4	16	47	86
MACH	6	5	17	14	47	89
OIL	24	3	11	11	74	123
PAPR	9	5	7	4	24	49
RETL	14	13	9	21	118	175
TRAN	4	2	3	5	42	56
TRON	7	5	9	10	103	134
Column Total	91	82	99	133	625	1030

*Industry Codes

AUTO	Automotive Products
CHEM	Chemicals
CONS	Construction
ELEC	Electrical Products
FOOD	Food and Beverage Makers
MACH	Machinery and Equipment
OIL	Oil and Gas
PAPR	Pulp and Paper
TRAN	Transportation
TRON	Electronics

focus is on explaining corporate governance dynamics in private sector corporations. Nevertheless, the exclusion of public sector firms has undoubtedly diminished the representation of Canadian, French, German, and U.K. firms relative to U.S. companies.

The sample was restricted to industry settings with a fair representation of firms from each of the five countries under examination. Sufficient representation was found to consider a good cross-section of 11 industrial sectors; Automotive Products (AUTO), Chemicals (CHEM), Construction (CONS), Electrical Products (ELEC), Food and Beverage Makers (FOOD), Machinery (MACH), Oil and Gas (OIL), Pulp and Paper (PAPR), Transportation (TRAN) and Electronics (TRON).

Pooled-cross-sectional data spanning the 1985-1990 fiscal years (ie. six years) of the sample firms was collected. As such the total number of observations in the final sample is (6 years * 1030 firms) 6180 company years.

The Disclosure-WorldScope data base is used as the primary data source for financial and strategic data. Unfortunately, there does not exist a single source of cross-national ownership data.

As such, ownership data was collected from country-specific publications. Canadian ownership data was collected from The Financial Post Survey of Industrials. French ownership data was taken from Dun and Bradstreet's France 30,000. German ownership data was gleaned from Commerzbank's

A Guide to Capital Links in German Companies. U.K. ownership data was found in The European Company Handbook. Finally, ownership data on U.S. firms were down-loaded from the Disclosure-Spectrum-Ownership data base on CD ROM.

The Disclosure-Worldscope database provides comprehensive financial data and company profiles on more than 3000 industrial firms from 24 countries. WorldScope compiles its data primarily from company annual reports in the case of non-U.S. firms, and S.E.C. filings (eg. 10K reports) for U.S. firms. Stock market data prior to 1987 is extracted from financial newspapers published in the country where a company's stock is listed. The Telekurs, AG (Zurich) stock price data base is the primary source of post 1987 market data.

The WorldScope database is designed with the view of making financial statements from around the world comparable (WorldScope-Disclosure, 1991). To this end, financial and summary data are supplied in a standardized format which minimizes cross-national differences in accounting terminology, stock price format, financial statement format, and language.

Further, detailed research was conducted by the data base vendor on national accounting practices and standards. Accordingly, WorldScope makes several technical adjustments in order to improve the comparability of the cross-national

financial data¹.

Notwithstanding these efforts by the WorldScope-Disclosure, market based measures which are insensitive to accounting conventions are employed in this study wherever possible. To minimize differences in reporting currencies among firms, measures insensitive to currency differences are used extensively. In the few instances where financial items reported in local currency must be used, these measures are re-stated in terms of U.S. dollars. For the purpose of currency translation, the average monthly exchange rates provided by WorldScope is used.

4.2 Description of the Measures

Ownership Measures

As discussed in Chapter 2, there is an absence of a consensus in the corporate governance literature concerning the operationalization of the owner and manager control constructs. Indeed, as illustrated in Figures 1 and 2, radically divergent conceptions of the relative control of owners and managers underlie alternative operationalizations.

Inherent in the use of a threshold measure of ownership and control is the assumption that control is either totally in the hands of managers, or shareholders. Also, threshold operationalizations measure shareholder influence directly and

¹ For specific details regarding these adjustments see WorldScope-Disclosure (1991) pages 11-13.

consider all residual control to be vested by default with management. On the other hand, insights from the legal and organizational views of corporate governance suggest that a broader array of stakeholders than owners and managers may influence corporate strategy and performance.

In using a continuous measure of ownership concentration, such non-trivial assumptions are avoided. That is, no attempt is made to operationalize 'manager control', or 'owner control'. Instead the focus is on utilizing a measure that best captures the degree of influence owners have over corporate activities. In doing so, no assumptions need be made regarding the relative control of any stakeholder other than owners.

For the purposes of this study, there are several additional considerations that mitigate against the use of a threshold based measure of ownership concentration.

First, there is a striking absence of a consensus in the corporate governance literature on the appropriate threshold level of stock concentration required to distinguish between owner and manager controlled firms (Kaulmann, 1987).

Second, given the divergent institutional contexts of the countries studied, important stock ownership concentration thresholds may differ materially across countries (eg. does 5% ownership concentration mean the same thing in all countries?).

Finally, on theoretical grounds, the dichotomization of

a continuous measure may result in the loss of important information.

It is for these reasons that ownership control will be operationalized here by a measure equal to the percentage of shares outstanding held by the largest shareholder (LARGEST). This operationalization approach entails making the important, but conceptually defensible assumption that the influence of a particular shareholder increases in direct proportion to their stock ownership.

In order to assess the comparability of alternative measures of ownership concentration, Pearson correlation coefficients were computed between three continuous and four threshold measures of ownership concentration; the percentage of shares held by the largest single shareholder (LARGEST), the percentage of shares held by all 5% shareholders (TOTFIVE), the Herfindahl measure of ownership concentration used by Baysinger et al (1991) (HERFCON) and 5% (T5), 10% (T10), 15% (T15), and 20% (T20) dichotomous thresholds measures of 'manager-control'.

The correlation coefficients between all pairs of possible ownership concentration measures are significant at the $p < .01$ (Table 19). The correlations range from an R^2 of .85 for TOTFIVE and HERFCON to a low of .24 for T5 and T20. The relatively, low correlation between T5, and T20 suggests that corporate governance results may be expected to be quite sensitive to the choice of threshold measure. In particular,

the relatively low correlation between T5 and all other measures indicates that a 5% cut-off may be too low to discriminate between manager and owner controlled firms.

Also of note is the fact that correlations between continuous measures (LARGEST, TOTFIVE, HERFCON) are typically higher (mean correlation = .83) than the correlations between threshold measures (mean correlation = .51). These findings suggest that there is greater consistency in the estimates of continuous measures of ownership concentration relative to threshold measures. That is, the choice of an appropriate threshold level appears to be more problematic than the choice between alternative continuous measures. These findings offer further support for the decision to use a continuous measure of ownership concentration in this study.

Problems of data availability meant that ownership information on most of the firms included in the study could only be obtained for the 1990 fiscal year. Rather than conducting a cross-sectional analysis and restricting the analyses to one year, ownership concentration is treated as a constant over the 1985-1990 time period. While not ideal, this approach allows pooled cross-sectional analyses to be conducted over a large segment of a business cycle (6 years).

By treating ownership concentration as a constant over a six year period, this study treats 1990 levels of ownership concentration as the best available estimate of ownership concentration in the five previous years. As such, implicit in

Table 19
Correlations Between Various Measures of Ownership Concentration

	LARGEST	TOTFIVE	HERFCON	T5	T10	T15
LARGEST	1.00					
TOTFIVE	0.84*	1.00				
HERFCON	0.81*	0.85*	1.00			
T5	0.27*	0.34*	0.69*	1.00		
T10	0.53*	0.62*	0.74*	0.41*	1.00	
T15	0.67*	0.72*	0.76*	0.29*	0.71*	1.00
T20	0.75*	0.74*	0.75*	0.24*	0.59*	0.83*

* p < .01

this sort of treatment is the assumption that levels of ownership concentration are relatively stable over time². That is, even if major shareholdings are sold, they are likely to be sold in blocks leaving another shareholder with a concentrated ownership stake.

In order to assess the appropriateness of treating 1990 ownership concentration levels as an estimate of ownership concentration in the 1985-1989 period, ownership data for each of the 1985-1989 years was compiled on 85 of the Canadian firms included in the sample. The correlations between actual levels of LARGEST for each year are displayed in Table 20.

The correlation coefficients in Table 20 are conceptually similar to reliability coefficients. That is, these correlations give a good indication of the degree of measurement error expected by treating $LARGEST_{1990}$ as an estimate of $LARGEST_{1985-89}$. Also, these correlations indicate the extent to which levels of ownership concentration change over time.

The correlation coefficients in Table 20 indicate that levels of stock concentration are fairly stable over the 1985-1990 time period. In all cases, the year to year correlations between measures of LARGEST are significant at the $p < .01$ level. Of particular significance, the correlations between $LARGEST_{1990}$ and $LARGEST_{1985-89}$ are quite high

² The assumption that ownership concentration levels are quite stable over time finds both theoretical and empirical support in the research of Morck et al (1988).

Table 20
Year to Year Correlations of Ownership Concentration (LARGEST): Canadian Sample

	1990	1989	1988	1987	1986	1985
1990	1.00					
1989	0.98*	1.00				
1988	0.87*	0.92*	1.00			
1987	0.80*	0.86*	0.93*	1.00		
1986	0.78*	0.83*	0.91*	0.99*	1.00	
1985	0.71*	0.76*	0.83*	0.91*	0.98*	1.00

* p < .01

ranging, from .71 to .98. These results show that levels of concentration change over time (ie. correlations between measures of LARGEST diminish over time), but that changes are rather small and incremental. As such, these findings indicate that $LARGEST_{1990}$ is a reasonable estimate of LARGEST in the preceding five years.

Profitability Measures

Given the ongoing controversy in economics and strategic management regarding the appropriateness of accounting based measures of firm performance (Bentson, 1985; Lubatkin & Shrieves, 1986) as well as the multi-dimensionality of the financial performance construct, multiple accounting and market based measures are used in this study.

All financial performance variables and their definitions are listed in Table 21.

Accounting Based Measures of Financial Performance³

Return on Assets (ROA). ROA is a measure equal to the ratio of net income to total assets. It captures the extent to which a firm's asset base is being used productively.

³ Originally, two other accounting based measures of performance were considered (ie. Net Margin % and Return on Equity). These measures were dropped because subsequent analyses demonstrated that results using these measures did not differ materially from those using the two accounting based measures of performance retained in the study. This suggests that subsequent results are robust across alternative accounting based measures of performance.

Table 21

Strategy and Performance Variables

Measures of Financial Performance

1. Return on Assets (ROA) = Net Income / Total Assets
2. Return on Invested Capital (ROIC) = Net Income / Invested Capital
3. Total Shareholder Return (TOTRET) = % Return from Stock Appreciation + % Return from Dividend Payments

Strategy Variables

4. Sales Growth Rate (SALESG) = $1 - \text{Sales}_t / \text{Sales}_{t-1}$
 5. % Foreign Sales (FSALES) = Foreign Sales / Total Sales
 6. Diversification (NBIZ) = Number of SIC Codes in which a firm operates
 7. Diversification Index (WD) = $WD = \sum P_i * d_i$
 8. R&D Intensity (RD) = Research and Development Expenditures / Sales
 9. Capital Expenditures to Fixed Assets (CAPFIX) = Capital Expenditure / Fixed Assets
 10. Dividend Pay-Out Ratio (PAYOUT) = Dividend Payments / Net Income
 11. Debt Ratio (DEBT%) = Total Debt / Total Assets
-

Return on Invested Capital (ROIC). ROIC is an accounting based measure of firm profitability supplied and computed by *WorldScope* and defined as net income (after taxes and interest, but before extraordinary items) plus income taxes and long-term debt interest expense stated as a percentage of the average capital invested (total assets - total liabilities) at the two latest year ends.

A Market Based Measure of Financial Performance

Total Shareholder Return (TOTRET). TOTRET is a market based measure of performance equal to the total investment return to shareholders from both stock appreciation and dividend payments (ie. $TOTRET = \% \text{ Return from Stock Appreciation} + \% \text{ Return from Dividend Payments}$). This measure accounts for the fact that returns to shareholders may be in the form of capital gains, or dividend payouts.

Strategic Variables

Since strategy is a highly multivariate construct (Hofer, 1975), the strategic conduct of firms is evaluated in terms of a number of strategic dimensions.

All strategic variables and their definitions are listed in Table 21.

Growth. The growth rates of the firms studied are evaluated in terms of changes from year to year in their sales volume

($SALESG = 1 - Sales_t / Sales_{t-1}$).

Geographic Scope. Geographic scope is measured by the percentage of company wide sales that are attributable to its foreign operations ($FSALES = \text{Foreign Sales} / \text{Total Sales} * 100$).

Diversification.

As noted by a number of researchers (eg. Caves, Porter & Spence, 1980; Pomfret & Shapiro, 1981), studies of diversification carried out on non-U.S. firms are hampered by the general unavailability of line of business data.

WorldScope does not list revenue by SIC category, but it does list the number of SIC codes in which the firm operates. As noted by Hill and Snell (1988), a simple count of the number of 4-digit SIC's in which a firm operates is a useful, but somewhat crude measure of diversification. Indeed in some instances, where line of business data is inaccessible, or unreliable it may be the best measure available. As such, one measure of diversification used in this study is (NBIZ) which is equal to the number of four digit SIC codes in which a firm operates.

Caves (1975), Caves et al (1980), Pomfret & Shapiro (1981) offer another means of measuring corporate diversification in instances where reliable line of business data is unavailable. They suggest the following weighted

measure of diversification,

$$WD = \sum P_i * d_{i,j}$$

Where i = a firm's primary market segment

j = secondary industries

$d_{i,j}$ = 0 if the firm operates in only one 4-digit industry

1 if j is in the same 3-digit industry as i

2 if j is in the same 2-digit industry as i

3 if i and j are in different 2-digit industries.

and

P_i = the weight imputed to each industry. The geometric series used here is 1,2,4,8,16 (Pomfret & Shapiro, 1981). For example, if a firm operates in two industries, the revenues from the SIC codes are assumed to be in the proportion 2:1. That is, 2/3, or 67% of total firm revenues are attributed to the first SIC code, and 1/3 or 33% of revenues are attributed to the second SIC code.

As such, the WD measure of diversification is identical to a standard Herfindahl measure of diversification with the exception that industry weights are imputed upon SIC codes from a geometric series, rather than from actual line of business data.

As noted by Palepu (1985), this type of measure captures several elements of a firm's diversity of operations within a single measure. That is: 1) it accounts for the number of different product market segments in which the firm competes

2) it factors in the distribution of sales across different product segments, and 3) it incorporates a consideration of the relatedness of the various product market segments in which a firm competes.

While *WorldScope* does not break down firm revenue by SIC code, in many cases it does list revenues by 'type' of business. In many cases the assignment of a percentage of firm revenues to an SIC code is fairly unambiguous. In these cases, a Herfindahl measure of diversification (**HERF**) in which SIC codes are weighted by actual revenues may be computed.

In order to assess the convergence of the **NBIZ**, **WD**, and **HERF** measures of diversification, the cross-correlations between the three variables were calculated in instances where reliable line of business data existed ($n = 553$) (Table 22). The cross-correlations in Table 22 suggest that both **NBIZ** ($R^2 = .81$) and **WD** ($R^2 = .84$) are strongly related to **HERF**. These findings suggest that in the absence of reliable line of business data, **NBIZ** and **WD** are suitable measures of diversification which approximate **HERF**.

Unfortunately, data availability problems precluded the possibility of computing diversification measures for the entire 1985-1990 time period. As such, both **NBIZ** and **WD** are treated as constants over company years.

Table 22

Correlations Between Alternative Measures of Diversification

	WD	NBIZ	HERF
WD	1.00		
NBIZ	0.80*	1.00	
HERF	0.84*	0.81*	1.00

* $p < .01$

R&D Intensity (RD). The R&D intensity of a firm's operations is evaluated by the ratio of R&D expenditures to sales. This measure of R&D intensity is widely used (eg. Gatignon & Anderson, 1988; Gomes-Casseres, 1989; Hennart, 1991) and unlike alternative measures, such as R&D expenditures per employee, factors out the effects of inflation (Hansen & Hill, 1991).

Capital Expenditures (CAPFIX). The emphasis that a firm places on upgrading its capital stock is measured in terms of the ratio of capital expenditures to fixed assets (CAPFIX = Capital Expenditures / Fixed Assets).

Dividend Payout Ratio (PAYOUT). The disposition of slack financial resources is evaluated by a firm's dividend payout ratio (PAYOUT = Dividend Payments / Net Income). This measure highlights the fact that slack resources may alternatively be paid out to shareholders in the form of dividends, or retained by the corporation for internal use.

Financial Leverage (DEBTR). The leverage of a corporation is evaluated in terms of the widely used debt ratio (DEBTR = Total Debt / Total Assets).

Other Variables

Three categories of potentially obfuscating factors must

necessarily be controlled for in any study dealing with corporate strategy and firm performance. In all multivariate analyses, the size of a company's operations is controlled for through the measure **LASSETS** which is equal to the log (base 10) of a company's asset base. The log is commonly used for statistical purposes since firm size is known to be log-normally distributed.

The competitive environment in which a firm operates must also be controlled for. The competitive environment dictates both the profit potential of a firm (Porter, 1980; Schmalensee, 1985; Wernerfelt & Montgomery, 1988) and the relative importance of particular strategic decisions (Hill & Snell, 1989; Porter, 1985). In this study, a series of industry indicator variables are used to control for a firm's competitive environment.

Third, the effects of the general business climate are controlled for in all regression models by including a series of five indicator variables.

4.3 Analytical Approach

Data analysis follows the 6 stage approach described below. Care has been taken to pattern the analyses in a logically appropriate sequence.

Throughout this study the terms moderator and mediator are not used synonymously. These terms are used to describe two distinct roles that third variables can play in

relationships between dependent and independent variables. Unfortunately, many studies have used the terms moderator and mediator interchangeably (Barron & Kenny, 1986; James & Brett, 1984). As a consequence, it is necessary to define these terms as they are used in this study.

Throughout this study, the term moderator is used to describe a third variable which affects the direction and/or strength of a relationship between a dependent and independent variable. In this study, national context is hypothesized to moderate the relationship between ownership concentration and firm performance and the relationship between ownership concentration and strategy. In other words, this study evaluates whether national context affects the direction and/or strength of the ownership concentration-performance and ownership concentration-strategy relationships.

In contrast, the term mediator is used throughout this study to describe a third variable which accounts for the relationship between a dependent and independent variable. In other words, a mediator is an intervening variable which explains how, or why two other variables are related. In this study, corporate strategy is hypothesized to mediate the relationship between ownership concentration and performance. That is, ownership concentration is expected to influence corporate performance by affecting the strategic decisions of managers rather than through a direct main effect.

Stage 1. Describing the sample.

The first step in analyzing the data collected involves the computation of descriptive and correlational statistics for all variables to be used in subsequent analyses.

These preliminary results are presented and discussed in Chapter 5.

Stage 2. Testing the Ownership Concentration-Performance Relationship.

The relationship between ownership concentration and performance is tested through 6 series of ordinary least square (OLS) regression models (ie. one series for the cross-national sample and one for each country). Separate models are fitted for each performance variable. As in all other multivariate analyses, appropriate control variables (eg. size, and industry) are included in these models and care has been taken to assess each model's conformity to standard OLS assumptions (linearity, homoscedasticity, absence of autocorrelation, or multi-collinearity).

The results from Stage 2 are presented in Section 6.1.

Stage 3. Testing the Moderating Influence of Nationality on the Ownership Concentration-Performance Relationship.

Multiple analysis of covariance (MANCOVA) is used to assess whether national context moderates the relationship between ownership concentration and performance. In particular, MANCOVA's are used to evaluate the hypothesis,

Ho: $\beta_{largest_{canada}} = \beta_{largest_{france}} = \beta_{largest_{germany}} = \beta_{largest_{uk}} = \beta_{largest_{us}}$

That is, the hypothesis that the LARGEST regression coefficients (ie. slopes) are equal (ie. parallel) across countries is evaluated. Low p levels on the F statistic suggests that the hypotheses of equal regression coefficients (slopes) can be rejected and that nationality moderates the relationship between ownership concentration and performance.

The preceding test indicates whether at least one country-pair of β coefficients is statistically different. In order to ascertain both the extent to which nationality moderates the ownership concentration-performance relationship, and the degree of country specificity in the ownership concentration-performance relationship, separate MANCOVA's are estimated for each country-pair (ie. 5 choose 2 = 10 pairs).

These results are presented in Section 6.2.

Stage 4. Testing the Ownership Concentration-Strategy Relationship.

The relationship between ownership concentration and particular strategic dimensions is assessed through a series of OLS regression models (ie. one for each country). Separate models are fitted for each strategy variable included in this study. The appropriate control variables are included in these models.

These results are presented in Section 6.3.

Stage 5. Testing the Moderating Influence of National Context on the Ownership Concentration-Strategy Relationship.

An analytical approach similar to that described in Stage 3 is used to assess whether national context moderates the relationship between ownership concentration and strategy.

A set of MANCOVA's is used to assess whether national context moderates the relationship between ownership concentration and a particular measure of strategy. That is, a series of 10 MANCOVA's on all possible country-pairs are estimated for each strategy variable considered in this study.

The results from Stage 5 are presented in Section 6.4.

Stage 6. Testing the Ownership Concentration-Strategy-Performance Relationship: Does Strategy Mediate the O-P Relationship?

The possible mediating function of strategy in the relationship between ownership concentration and performance is evaluated using the procedure outlined by Baron and Kenny (1986) (Figure 6). According to Baron and Kenny's criteria, a variable functions as a mediator if it meets the following

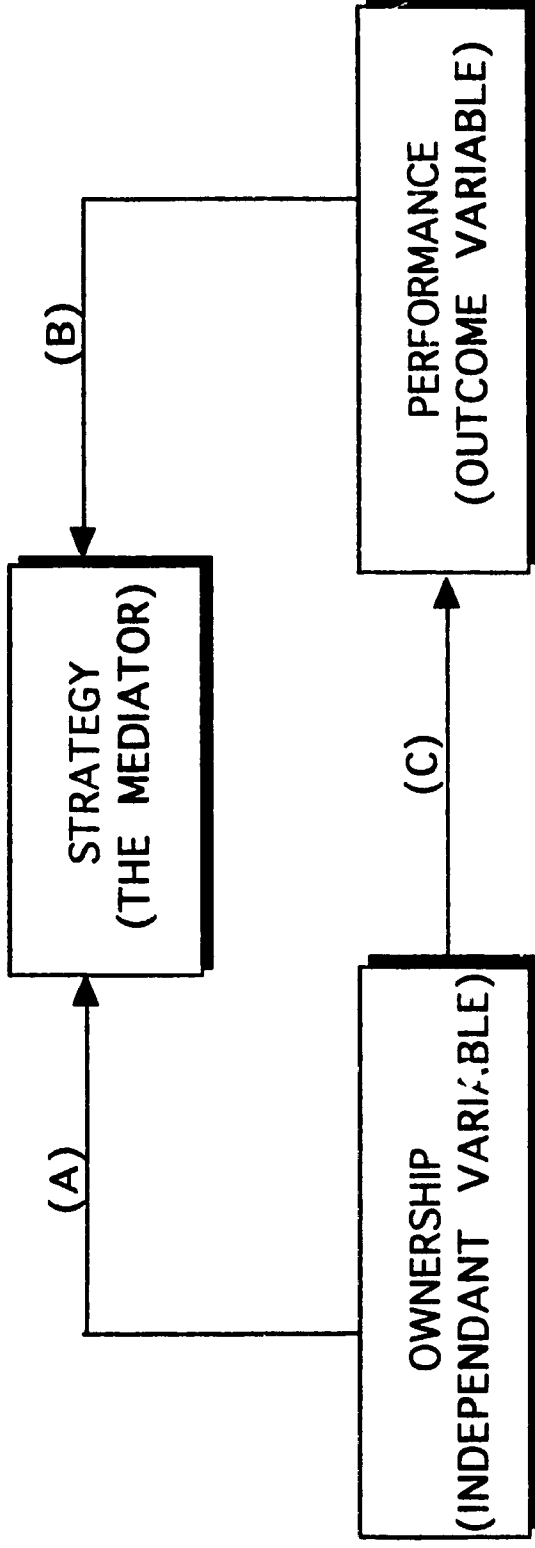


FIGURE 6: Testing Mediation (Baron and Kenny, 1986)

conditions⁴ (p. 1176).

- a) variations in levels of the independent variable significantly account for variations in the presumed mediator.
- b) variations in the mediator significantly account for variations in the dependent variable.
- c) when the relationships in a) and b) are controlled for, a previous significant relationship between the dependent and independent variable is no longer significant (perfect mediation), or less significant.

Accordingly, the following steps are used to test whether strategy mediates the ownership concentration-performance relationship.

⁴ As used in this study, the test of mediation developed by Barron and Kenny is analogous to path analysis in that both techniques use regression analysis to evaluate all possible direct and indirect effects between variables.

Barron and Kenny's approach is used here for two reasons. First, this technique is specifically designed to evaluate the mediating effect of a variable on the relationship between two other variables. Second, Baron and Kenny's criteria is among the most rigorous available. That is, other tests of mediation do not impose the added criteria of a direct relationship between the predictor and criterion variable (eg. Pedhazur, 1982).

- a) Ownership concentration is regressed on each of the performance measures examined in this study. Since this step is identical to Stage 1 outlined above, only those relationships found significant at the earlier stage need be considered. If no significant relationship between ownership concentration and performance is found in Stage 1, steps b and c are unnecessary since this initial criteria is not met. In this event, steps b and c outlined below can be skipped.

- b) Each strategy variable is regressed on all performance measures. Only, those strategy-performance pairings which are found to be significant will be carried over to step c. If no strategy-performance pairings are found to be significant, step c will be omitted.

- c) Both ownership concentration and strategy variables are entered hierarchically into a regression model with performance dependent variables. Control variables are entered first. The ownership concentration measure is entered next. Finally, a strategy variable is entered. A particular strategy variable will be deemed to act as a moderator, if...
 - i. The strategy variable retains its significance in the context of a regression model including ownership concentration as a predictor and,

- ii. The inclusion of the strategy variable eliminates, or diminishes the significance of a previously significant relationship between ownership concentration and performance.

The results from Stage 6 are presented in Section 6.5.

CHAPTER 5

Descriptive and Correlational Findings

In this chapter, descriptive and correlational statistics are discussed both as a prelude to the presentation of the multivariate results in Chapter 6 and as a means of offering some initial insights on the research issues described in earlier chapters.

5.1 Descriptive Statistics

In Table 23, aggregate and within-country means and standard deviations for ASSETS as well as each dependent and predictor variable considered in this study are presented.

The statistics in Table 23 suggest quite strongly that firms from Canada, France, Germany, the U.K. and the U.S. differ along a number of ownership concentration, strategic and performance dimensions. In order to test the statistical significance of these differences, a series of Scheffe multiple comparison F-Tests were conducted on each variable listed in Table 23.

Table 23

Means, Standard Deviations Broken Down By Country^a

	ALL	CANADA	FRANCE	GERMANY	U.K.	U.S.
Largest Shareholder (LARGEST)	9.82 27.42	49.20 28.67	48.56 25.36	67.25 30.01	21.54 23.28	19.58 17.39
Assets \$US M (ASSETS)	\$277 \$1,060	\$114 \$183	\$692 \$1,012	\$253 \$505	\$337 \$586	\$320 \$1,326
Return on Assets (ROA)	6.78 9.84	4.83 8.25	17.37 20.01	5.64 6.96	4.98 3.72	6.14 8.08
Return on Invested Capital (ROIC)	11.17 12.46	8.38 10.01	9.73 9.31	11.65 11.70	17.90 12.80	10.32 12.78
Total Shareholder Return (TOTRET)	10.53 30.36	7.51 28.72	14.99 34.93	13.55 33.82	12.79 27.95	9.69 30.03
Sales Growth (SALESG)	10.32 15.88	8.81 15.65	10.08 14.45	7.94 14.34	12.39 16.63	10.75 16.20
Foreign Sales (FSALES)	16.74 22.18	17.91 23.52	27.74 25.17	19.96 25.56	29.69 26.61	11.81 17.71
SIC Codes (NBIZ)	2.72 1.43	3.17 1.44	3.49 1.42	3.32 1.31	3.46 1.42	2.28 1.27
Weighted Diversification (WD)	0.76 0.52	0.90 0.47	0.95 0.46	0.90 0.41	0.94 0.45	0.65 0.53
R&D Intensity (RD)	1.28 3.19	0.54 2.16	1.19 3.61	1.41 2.92	0.59 2.00	1.55 3.47
Capital Expenditures (CAPFX)	13.36 8.34	12.14 7.78	13.23 7.38	11.78 6.30	16.10 9.20	13.18 8.44
Payout Ratio (PAYOUT)	40.89 29.45	38.53 27.33	31.88 25.25	62.53 32.19	39.65 22.03	39.39 30.44
Financial Leverage (DEBTR)	56.15 19.33	50.46 18.49	41.47 24.14	56.25 17.78	76.02 8.47	53.46 18.26

^a Variable definitions are provided in Table 21.

That is, Scheffe tests were conducted in order to evaluate the hypothesis that country means (between all possible country-pair) are equal. Scheffe's were run on each variable looking for differences at four significance levels (ie. $p < .001$; $p < .01$; $p < .05$; $p < .1$). The results of these 52 analyses (ie. 13 variables * 4 significance levels) are compiled in Tables 24-36.

As reflected in Tables 23 and 25 the average size of firms varies significantly across national contexts. On average, French firm are the largest (Total Assets = \$692M) followed by their counterparts in the U.K. (\$337M), the U.S. (\$320M), Germany (\$253M) and Canada (\$114M). These differences may reflect both the important dissimilarities in disclosure requirements across national contexts discussed earlier (which limits data availability), as well as actual differences in average firm size. Still, the large standard deviations in ASSETS suggests that within each country a wide cross-section of medium to large sized firms meeting the U.S. \$50M cut-off are included in the sample.

As might be expected, ownership concentration measured by the percentage of shares held by the largest shareholder is the lowest amongst U.S. firms (19.58%). Scheffe results indicate that U.S. levels of ownership concentration are significantly lower at $p < .001$ than those found in Canada (49.20%), France (48.56%), and Germany (67.25%). Ownership concentration in the U.K. (21.54%) is slightly, but not

Table 24

SCHEFFE Results
Differences Between Countries
On Ownership Concentration (LARGEST)

	Canada	France	Germany	U.K.
France	NS			
Germany	****	****		
U.K.	****	****	****	
U.S.	****	****	****	NS

- * Country-pair significantly different at $p < .1$
- ** Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

Table 25

**SCHEFFE Results:
Differences Between Countries
On Log of Assets (LASSETS)**

	Canada	France	Germany	U.K.
France	NS			
Germany	****	****		
U.K.	****	****	NS	
U.S.	**	****	****	****

- * Country-pair significantly different at $p < .1$
- ** Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

Table 26

**SCHEFFE Results:
Differences Between Countries On
Return on Assets (ROA)**

	Canada	France	Germany	U.K.
France	****			
Germany	NS	****		
U.K.	NS	****	NS	
U.S.	**	****	NS	*

- * Country-pair significantly different at $p < .1$
- ** Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

Table 27

**SCHEFFE Results:
Differences Between Countries On
Return on Invested Capital (ROIC)**

	Canada	France	Germany	U.K.
France	****			
Germany	****	****		
U.K.	NS	****	NS	
U.S.	****	****	NS	NS

- * Country-pair significantly different at $p < .1$
- ** Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

Table 28

**SCHEFFE Results:
Differences Between Countries On
Total Shareholder Return (TOTRET)**

	Canada	France	Germany	U.K.
France	**			
Germany	*	NS		
U.K.	NS	NS	NS	
U.S.	NS	**	NS	NS

- * Country-pair significantly different at $p < .1$
- ** Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

Table 29

**SCHEFFE Results:
Differences Between Countries On
Sales Growth Rate (SALESG)**

	Canada	France	Germany	U.K.
France	NS			
Germany	NS	NS		
U.K.	**	NS	****	
U.S.	NS	NS	***	NS

- * Country-pair significantly different at $p < .1$
- ** Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

Table 30

**SCHEFFE Results:
Differences Between Countries On
Foreign Sales (FSALES)**

	Canada	France	Germany	U.K.
France	****			
Germany	NS	****		
U.K.	****	NS	****	
U.S.	****	****	****	****

- * Country-pair significantly different at $p < .1$
- ** Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

Table 31

**SCHEFFE Results:
Differences Between Countries On
Number of SIC Codes (NBIZ)**

	Canada	France	Germany	U.K.
France	***			
Germany	NS	NS		
U.K.	***	NS	NS	
U.S.	****	****	****	****

- * Country-pair significantly different at $p < .1$
- ** Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

Table 32

**SCHEFFE Results:
Differences Between Countries On
Weighted Diversification (WD)**

	Canada	France	Germany	U.K.
France	NS			
Germany	NS	NS		
U.K.	NS	NS	NS	
U.S.	****	****	****	****

- * Country-pair significantly different at $p < .1$
- ** Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

Table 33

**SCHEFFE Results:
Differences Between Countries On
R&D Intensity (RD)**

	Canada	France	Germany	U.K.
France	**			
Germany	****	NS		
U.K.	NS	**	****	
U.S.	****	NS	NS	****

- * Country-pair significantly different at $p < .1$
- ** Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

Table 34

**SCHEFFE Results:
Differences Between Countries On
Capital Expenditures (CAPFIX)**

	Canada	France	Germany	U.K.
France	NS			
Germany	NS	NS		
U.K.	****	****	****	
U.S.	*	NS	***	****

- * Country-pair significantly different at $p < .1$
- ** Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

Table 35

**SCHEFFE Results:
Differences Between Countries On
Dividend Payout Ratios (PAYOUT)**

	Canada	France	Germany	U.K.
France	**			
Germany	****	****		
U.K.	NS	****	****	
U.S.	NS	****	****	NS

- * Country-pair significantly different at $p < .1$
- ** Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

Table 36

**SCHEFFE Results:
Differences Between Countries On
Debt Ratios (DEBTR)**

	Canada	France	Germany	U.K.
France	****			
Germany	****	****		
U.K.	****	****	****	
U.S.	***	****	***	****

- * Country-pair significantly different at $p < .1$
- ** Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

significantly higher than that found in the U.S., but is significantly ($p < .001$) lower than that of Canada, France and Germany. German levels of ownership concentration are significantly higher ($p < .001$) than all other countries under examination.

These findings suggest a number of important implications for any cross-national study of corporate governance.

First, the heterogeneity of ownership concentration levels across different countries indicates that different operative thresholds may be required to distinguish between manager and owner controlled firms. Moreover, differences across countries may be suggestive of the presence of distinct institutional contexts which influence norms pertaining to ownership concentration.

Second, the high levels of ownership concentration in all countries studied suggests that a 5% threshold may not be the appropriate demarcation between owner and manager control. Indeed, even in the U.S., the average level of ownership concentration is close to 4 times the traditional 5% cut-off¹. This finding may explain why the 5% threshold measure was found to exhibit a relatively weak convergence with other

¹ Indeed, the separation of ownership and control thesis is premised on widely dispersed shareholdings well below those observed here. In a recent study, Davis (1991) found that the average ownership stake of all 5% shareholders in his sample of U.S. firms was 26.97%. Taken together, Davis' results and the findings presented here suggest that the ownership of U.S. firms is marked by substantially less dispersion than is commonly believed.

alternative measures of ownership concentration (Table 19).

Third, the significant differences in ownership concentration across countries might logically impact upon corporate strategy and performance. Indeed, Tables 26 to 36 indicate that Canadian, French, German, U.K. and U.S. firms differ along a number of important strategy and performance dimensions. In fact, statistically significant differences of the order $p < .05$ are found between at least two country-pairs on each of the strategy and performance indices examined. Moreover, in terms of most strategy and performance variables, at least 5 of 10 country-pairs exhibit significant differences ($p < .05$). Of particular note, financial leverage (DEBTR) is significantly different across all possible country-pairs at $p < .01$ (Table 36).

With respect to financial results, differences across countries are more pronounced in terms of accounting measures of performance than market based measures. That is, five country-pairs exhibit statistically different levels of returns on assets (ROA) at $p < .05$ (Table 26). Six country-pairs have statistically different levels of returns on invested capital (ROIC) at $p < .001$ (Table 27). In contrast, only two statistically significant differences (at $p < .05$) between countries are found in terms of the market based measure total shareholder return (TOTRET). That is, the TOTRET's of French firms (14.99%) are significantly higher than those of Canadian (7.51%) and U.S. firms (9.69%) (Table

28)².

Substantial differences exist across Canadian, French, German, U.K. and U.S. firms in terms of a number of strategy indices.

Three country-pairs are statistically different at $p < .05$ in terms of sales growth rates (SALESG) (Table 29).

Eight of ten possible country-pairs exhibit statistically significant differences of the order $p < .001$ in term of the ratio foreign to total sales (FSALES) (Table 30). Not surprisingly, U.S. firms which are located in a large domestic market rely less on foreign sales (11.81%) than do their counterparts in other countries. In contrast, French (27.74%) and U.K. firms (29.69%) appear quite reliant on foreign sales.

Six country-pairs exhibit statistically significant differences ($p < .01$) in terms of the number of SIC codes in which they operate (NBIZ) (Table 31). Four country-pairs are significantly different ($p < .001$) in terms of the weighted diversification measure (WD) (Table 32). U.S. firms appear to be the most striking outlier in terms of diversification within the context of this study. That is, U.S. firms exhibit lower and statistically significant ($p < .001$) levels of diversification than firms located in other countries. This may be at least partially attributable to the active market for corporate control in the U.S. during the last half of the

² This may reflect the relatively unsophisticated nature of French capital markets (Price Waterhouse, 1989b) rather than true performance differences.

1980's which has forced many firms to divest businesses unrelated to their core activities (Jensen, 1988).

R&D expenditures vary widely from country to country (Table 33). Six country-pairs are significantly different at the $p < .05$ level. Measured in terms of the ratio of R&D expenditures to sales (RD), German (1.41%) and U.S. (1.55%) firms spend more on R&D expenditures than their Canadian (0.54%) and U.K. (0.59%) counterparts.

Capital expenditures also vary substantially across countries (Table 34). Measured in terms of the ratio of capital expenditures to total fixed assets (CAPFIX), five country-pairs are significantly different at $p < .01$. In particular, the CAPFIX of U.K. firms (16.10%) is higher than that of their counterparts in all other countries studied ($p < .001$).

Dividend payout ratios (PAYOUT) are another dimension which exhibits substantial cross-national differences (Table 35). Seven of ten possible country-pairs are significantly different at $p < .05$. The PAYOUT ratios of German firms (62.53%) are much higher than those of their counterparts in other countries ($p < .001$). In contrast, the payout ratios of French firms (31.88%) are lower than those of firms located in all other countries ($p < .05$).

Of all the strategy and performance indices examined in this study, financial leverage (DEBTR) exhibits the widest degree of heterogeneity across countries (Table 36). That is,

all possible country-pairs are statistically significant at $p < .01$. U.K. firms make the most use of debt financing (76.02%), followed by their counterparts in Germany (56.25%), the U.S. (53.46%), Canada (50.46%) and France (41.47%).

Taken together, these findings suggest that national context plays an important role in shaping ownership concentration levels as well as corporate strategy and financial performance.

5.2 Correlational Statistics

The insights of Miller (1981) suggest that national context may not only affect ownership concentration, strategy and performance, but also moderate the relationship between these variables of importance to corporate governance and strategic management. That is, national context may be a contingency variable which moderates the ownership concentration-strategy, ownership concentration-performance and strategy-performance relationships.

While the possible moderating influence of national context will be evaluated in a more rigorous manner in Chapter 6, the Pearson correlations listed in Table 37 offer preliminary support for the hypothesized moderating influence of national context on the ownership concentration-strategy and ownership concentration-performance relationships.

Table 37 Cont'd

Pearson Correlation Coefficients

	LARGEST	LASSETS	ROA	ROIC	TOTRET	WD	NBIZ	RD	CAPFIX	PAYOUT	FSALES	SALESG	DEBTR
TOTRET	-.01	.06	.18	.23	1.00								
Canada	.05	.02	.28	.34	1.00								
France	-.02	.03	.01	.10	1.00								
Germany	-.01	.06	.18	.23	1.00								
U.K.	.01	.05	.13	.12	1.00								
U.S.	-.06	.11	.27	.28	1.00								
WD	.06	.30	-.03	-.03	.03	1.00							
Canada	.16	.15	.06	.11	.04	1.00							
France	-.11	.29	-.01	-.05	-.01	1.00							
Germany	.06	.30	-.03	-.03	.03	1.00							
U.K.	-.07	.24	-.17	-.12	-.02	1.00							
U.S.	-.13	.34	-.09	-.06	.03	1.00							
NBIZ	.07	.39	.03	.02	.05	.80	1.00						
Canada	.15	.27	.16	.16	.01	.77	1.00						
France	-.22	.29	.12	.02	-.02	.75	1.00						
Germany	.07	.39	.03	.02	.05	.80	1.00						
U.K.	-.15	.37	-.15	-.12	-.02	.74	1.00						
U.S.	-.18	.43	-.07	-.02	.07	.83	1.00						
RD	-.05	.01	.01	.01	.01	-.07	-.07	1.00					
Canada	-.12	.04	-.11	.01	-.03	-.01	-.05	1.00					
France	.13	.25	-.08	.08	.15	-.01	-.01	1.00					
Germany	-.05	.01	.01	.01	.01	-.07	-.07	1.00					
U.K.	.01	.15	-.01	.03	.03	-.04	.01	1.00					
U.S.	-.08	-.04	.04	.01	-.02	-.05	-.08	1.00					

Table 37 Cont'd
Pearson Correlation Coefficients

	LARGEST	LASSETS	ROA	ROIC	TOTRET	WD	NBIZ	RD	CAFFIX	PAYOUT	FSALES	SALESG	DEBTR
CAFFIX	-.02	-.11	.18	.26	.04	-.13	-.12	.11	1.00				
Canada	.02	-.09	.15	.17	-.01	-.06	-.11	.06	1.00				
France	-.02	-.05	.08	.31	.02	.03	.01	.26	1.00				
Germany	-.02	-.11	.18	.26	.04	-.13	-.12	.11	1.00				
U.K.	.05	-.20	.25	.28	-.07	-.15	-.11	-.07	1.00				
U.S.	.05	-.11	.30	.27	.06	-.17	-.18	.15	1.00				
PAYOUT	.06	.07	-.24	-.28	-.17	.08	.07	.01	-.18	1.00			
Canada	-.04	-.04	-.27	-.30	-.24	.03	-.06	-.02	-.08	1.00			
France	-.02	-.08	-.21	-.35	-.17	.03	-.07	-.17	-.23	1.00			
Germany	.06	.07	-.24	-.28	-.17	.08	.07	.01	-.18	1.00			
U.K.	.05	.14	-.35	-.33	-.25	.07	.07	.08	-.17	1.00			
U.S.	-.11	.09	-.33	-.34	-.17	.11	.14	.005	-.23	1.00			
FSALES	-.01	.24	.06	.04	.004	.17	.29	.18	-.01	-.01	1.00		
Canada	-.14	.06	-.06	-.04	-.13	.12	.12	.28	.03	-.02	1.00		
France	.09	.22	.19	.08	-.07	.15	.29	.06	.02	-.23	1.00		
Germany	-.01	.24	.06	.04	.01	.17	.29	.18	-.01	-.01	1.00		
U.K.	-.12	.18	-.05	-.04	-.02	.09	.29	.16	-.19	.06	1.00		
U.S.	-.11	.25	-.01	-.01	.03	.12	.16	.30	-.04	.06	1.00		
SALESG	-.06	-.05	.21	.29	.12	-.10	-.07	.04	.32	-.20	-.001	1.00	
Canada	-.01	-.04	.27	.36	.11	.02	.06	-.02	.34	-.21	.002	1.00	
France	-.06	.08	.16	.17	.06	.02	.07	.01	.10	-.02	.06	1.00	
Germany	-.06	-.05	.21	.29	.12	-.10	.04	-.07	.32	-.20	-.01	1.00	
U.K.	-.03	-.25	.26	.30	.02	-.15	-.11	-.02	.40	-.25	-.15	1.00	
U.S.	-.01	-.05	.30	.31	.13	-.12	-.10	.07	.32	-.23	-.01	1.00	

Table 37 Cont'd
Pearson Correlation Coefficients

	LARGEST	LASSETS	ROA	ROIC	TOTRET	WD	NBIZ	RD	CAPFIX	PAYOUT	FSALES	SALESG	DEBTR
DEBTR	-.06 ^{**}	.30 ^{**}	-.36 ^{**}	-.04 ^{**}	-.02	.17 ^{**}	.20 ^{**}	-.17 ^{**}	.01	.02	.11 ^{**}	-.01	1.00
Canada	-.04	.25 ^{**}	-.20 ^{**}	.01	-.07	.20 ^{**}	.15 ^{**}	.00	-.01	-.03	.12 ^{**}	.06	1.00
France	.15 ^{**}	.02	-.45 ^{**}	-.28 ^{**}	.04	-.06	.03	-.07	-.11	.04	-.07	-.17 ^{**}	1.00
Germany	-.06 ^{**}	.30 ^{**}	-.36 ^{**}	-.04 ^{**}	-.02	.17 ^{**}	.20 ^{**}	-.17 ^{**}	.01	.02	.11 ^{**}	-.01	1.00
U.K.	-.11 ^{**}	.11 ^{**}	-.34 ^{**}	.04	-.03	.01	.09 ^{**}	.08 ^{**}	.22 ^{**}	.08 ^{**}	.07 ^{**}	.06	1.00
U.S.	-.02	.31 ^{**}	-.41 ^{**}	-.22 ^{**}	-.03	.15 ^{**}	.17 ^{**}	-.21 ^{**}	-.09 ^{**}	.03	-.01	-.05 ^{**}	1.00

* p < .05

** p < .01

* Variable definitions are provided in Table 21.

Table 37 lists both aggregate and within country Pearson correlation coefficients (two-tail) between LASSETS (Log of Assets), ownership concentration (LARGEST), and all strategy and performance indices considered in this study. While care must be taken in interpreting these correlations since important variables such as industry context are not controlled for in these analyses, these results indicate quite strongly that the relationships between ownership concentration, strategy and performance differ materially from country to country.

Of particular note are the within-country correlations between ownership concentration (LARGEST) and firm size (LASSETS). While the relationship between LARGEST and LASSETS is negative and significant in Germany, the U.K. and the U.S. ($p < .01$), the relationship is positive in Canada and France. This finding suggests that the separation of ownership and control thesis which implies the wide dispersion of ownership among large corporations may not be generalizable across national contexts.

Interesting cross-national differences are also apparent in the relationship between ownership concentration and corporate strategy and performance variables.

For instance, while the relationship between LARGEST and ROA is positive in Canada and Germany, it is negative in France and non-significant in the U.S. and the U.K. Similarly, the relationship between ownership concentration and

diversification (NBIZ and WD) varies considerably across countries. While ownership concentration is negatively associated with diversification in France, the U.K. and the U.S., ownership concentration and diversification are positively related in Canada and Germany. Similarly, ownership concentration and R&D intensity are positively correlated in France, but negatively related elsewhere.

Additionally, cross-national differences are also apparent in the relationship between corporate strategy and performance. For instance, diversification (NBIZ) is negatively related to performance (ROA) in the U.K. and the U.S., but these two variables are positively related in Canada and France. This last finding suggests that a large body of U.S. studies indicating a negative relationship between diversification and performance (eg. Rumelt, 1982) may not be generalizable outside that national context.

5.3 Summary

The results presented here are only preliminary and are based on fairly basic descriptive and correlational analyses. Still, two important conclusions can be drawn from the results presented thus far.

First, as discussed in Section 5.1, material and statistically significant cross-national differences exist in the ownership concentration levels, strategies and the financial performance of firms.

Second, the relationship between ownership concentration and multiple measures of corporate strategy and financial performance differ substantially across national contexts. That is, cross-national differences exist both in terms of the ownership concentration, strategy and performance profiles of Canadian, French, German, U.K. and U.S. firms, and in terms of the relationship between these variables which are central to the study of both corporate governance and strategic management. Indeed, these findings indicate important cross-national differences in each of the three key elements of the research model presented here (Figure 3).

Several theoretical and practical conclusions can be drawn from the findings presented in this chapter.

First, correlational analysis offers preliminary support for the hypothesized moderating effect of national context on the ownership concentration-strategy and ownership concentration-performance relationships. From a public policy perspective, this implies that the important institutional differences discussed in Section 3.1 (D) influence both corporate behaviour and performance outcomes.

Further, the results presented here indicate that corporate governance and corporate strategy relationships may not be generalizable across national contexts. For instance, consider the relationship between ownership concentration (LARGEST) and diversification (WD).

At the cross-national level, there appears to be a

positive and significant relationship between ownership concentration and diversification. This finding is troublesome because of the large number of U.S. findings which have found a negative relationship between these two variables (eg. Amihud & Lev, 1981; Hill & Snell, 1989). However, by assessing the ownership concentration-diversification relationship at the country-level, it is apparent that significant cross-national differences exist.

In fact, the relationship between ownership concentration and diversification is negative in the U.S. (and France and the U.K.), but it is positive in Canada and Germany. These findings serve as an example of how aggregate-level relationships which implicitly assume context neutrality (and the generalizability of findings) may be misleading. That is, what appears to be a single positive relationship between ownership concentration and diversification is in fact five separate country-specific relationships differing both in terms of sign and/or magnitude.

As such, the findings presented here should be of concern to both researchers who need to assess the generalizability of their findings, but also managers who must function in multiple national contexts.

CHAPTER 6

Multivariate Findings

In Chapter 6, this study goes beyond the descriptive and correlational findings of the previous chapter. In doing so, the research model and hypotheses developed in Chapter 3 are systematically evaluated using the multivariate analytical approach detailed in Section 4.3.

This chapter is organized in the following manner.

First, the results from a series of OLS regression models which evaluate the relationship between ownership concentration and corporate financial performance are presented (Section 6.1).

Second, results from a series of MANCOVA's are described which evaluate the moderating effect of national context on the ownership concentration-performance relationship (Section 6.2).

Third, results from a series of OLS regression models which evaluate the relationship between ownership concentration and a number of strategy indices are presented (Section 6.3).

Fourth, the moderating influence of national context on

the ownership concentration-strategy relationship is evaluated via a series of MANCOVA's (Section 6.4).

Fifth, results are presented which evaluate the entire ownership concentration-strategy-performance relationship across national contexts, as well as within each national context (Section 6.5).

Sixth, in Section 6.6, some ancillary results are reported regarding the relationship between ownership concentration and firm performance among U.S. firms.

In Section 6.7, a preliminary discussion and summary of the results reported in this chapter is offered. These results are discussed at greater length in Chapter 7.

6.1 Results: The Ownership Concentration-Financial Performance Relationship

Table 38 contains the results of a series of three OLS models run on the entire cross-national sample. In these models, ownership concentration (LARGEST) is regressed on return on assets (ROA), return on invested capital (ROIC), and total shareholder return (TOTRET). The effects of size (Log of Assets (LASSETS)), foreign control, year, industry and national context are controlled for, but for presentation purposes, only the regression statistics for ownership concentration (LARGEST) and Log of Assets (LASSETS) are listed in Table 38.

Table 38

**Cross-National Regression Results:
Ownership Concentration (LARGEST) on Performance^a**

	ROA	ROIC	TOTRET
LARGEST	-.001 (-.14)	-.0002 (-.02)	-.0002** (-2.1)
LASSETS	-.36* (-1.8)	.763*** (2.9)	.018*** (6.5)
Intercept	6.56 (4.9)	3.76 (2.1)	1.98 (105.6)
Adjusted R²	.16	.08	.12
F	46.70***	22.54***	29.61***

^a Regression coefficients are reported
T-Statistics reported in parentheses

* p < .10

** p < .05

*** p < .01

Quite clearly, the results do not support the agency theory hypothesis (Hypothesis 1A) of a positive relationship between ownership concentration and financial performance. On the other hand, the results offer fairly strong support for the property rights hypothesis (Hypothesis 1B) of no relationship between ownership concentration and financial performance.

That is, ownership concentration (LARGEST) is not significant in either of the return on assets (ROA), or return on invested capital (ROIC) models. Moreover, the regression coefficients and t-statistics of ownership concentration (LARGEST) are very close to 0 in both these models.

While ownership concentration (LARGEST) is negative and significant ($p < .05$) in the total shareholder return (TOTRET) equation, the relatively small size of the regression coefficient (ie. $< -.001$) and the low adjusted R^2 (.12) of the model suggests that this effect is quite small.

In short, the results presented in Table 38 tend to support the property rights hypothesis of no relationship between ownership concentration and firm performance rather than agency theory's hypothesized positive relationship.

Tables 39-43 contain within-country regression results. Once again, Log of Assets (LASSETS), year, as well as industry context are controlled for. The within-country results resemble those obtained at the cross-national level. That is, the findings offer no support for agency theory's hypothesized

positive relationship between ownership concentration and financial performance.

In Canadian regressions (Table 39), the ownership concentration term is not a significant predictor of any of the three financial performance measures used here.

In France (Table 40), ownership concentration is negatively related to return on invested capital (ROIC) ($p < .05$), but is unrelated to return on assets (ROA) and total shareholder return (TOTRET).

In Germany (Table 41), ownership concentration is negatively related to return on assets (ROA) ($p < .05$), but is not related to return on invested capital (ROIC) nor total shareholder return (TOTRET).

U.K. results mirror those of France (Table 42). Ownership concentration is negatively related to return on invested capital (ROIC) and unrelated to return on assets (ROA) and total shareholder return (TOTRET).

In the U.S. (Table 43), ownership concentration is negatively related to total shareholder return (TOTRET), but is unrelated to return on assets (ROA) and return on invested capital (ROIC).

Two initial conclusions can be drawn from these results.

First, the hypothesized agency theory positive relationship between ownership concentration and financial performance is not apparent at either the cross-national, or country-specific levels on any of the three performance

Table 39

**Canada Regression Results:
Ownership Concentration (LARGEST) on Performance***

	ROA	ROIC	TOTRET
LARGEST	.01 (.35)	.013 (.68)	-.0001 (-.19)
LASSETS	.60 (.78)	2.5*** (2.7)	.01 (.88)
Intercept	-1.47 (-.33)	-5.7 (-1.1)	2.02 (30.4)
Adjusted R ²	.09	.12	.14
F	3.58***	4.53***	4.94***

* Regression coefficients are reported

T-Statistics reported in parentheses

· p < .10

·· p < .05

··· p < .01

Table 40

**France Regression Results:
Ownership Concentration (LARGEST) on Performance^a**

	ROA	ROIC	TOTRET
LARGEST	-.017 (-.37)	-.0002** (-2.1)	.0003 (.91)
LASSETS	7.3*** (3.1)	.007* (1.6)	.015 (.94)
Intercept	-19.33 (-1.2)	2.06 (70.5)	1.97 (18.1)
Adjusted R²	.13	.13	.33
F	4.43***	4.19***	10.58***

^a Regression coefficients are reported

T-Statistics reported in parentheses

* p < .10

** p < .05

*** p < .01

Table 41

**Germany Regression Results:
Ownership Concentration (LARGEST) on Performance***

	ROA	ROIC	TOTRET
LARGEST	-.022** (-2.1)	.017 (.91)	-.0001 (-.56)
LASSETS	-3.6*** (-5.9)	-2.63*** (-2.4)	-.019 (-1.5)
Intercept	25.17 (5.7)	19.73 (2.6)	2.24 (23.2)
Adjusted R ²	.12	.07	.45
F	5.13***	3.28***	13.6***

* Regression coefficients are reported
T-Statistics reported in parentheses

· p < .10
 ** p < .05
 *** p < .01

Table 42

**U.K. Regression Results:
Ownership Concentration (LARGEST) on Performance***

	ROA	ROIC	TOTRET
LARGEST	.00002 (.87)	-.0002* (-1.8)	-.0001 (-.31)
LASSETS	-.003*** (-2.99)	-.011*** (-3.3)	.015** (2.02)
Intercept	2.03 (299.64)	2.11 (91.88)	2.02 (38.35)
Adjusted R ²	.10	.10	.13
F	5.54***	5.2***	6.11***

* Regression coefficients are reported
T-Statistics reported in parentheses

· p < .10
* p < .05
*** p < .01

Table 43

**U.S. Regression Results:
Ownership Concentration (LARGEST) on Performance^a**

	ROA	ROIC	TOTRET
LARGEST	.005 (.58)	.005 (.34)	-.0003** (-2.3)
LASSETS	-.41* (-1.8)	1.3*** (3.7)	.02*** (6)
Intercept	7.35 (4.9)	1.34 (.58)	1.96 (86.4)
Adjusted R²	.07	.06	.12
F	13.70***	11.57***	22.01***

^a Regression coefficients are reported

T-Statistics reported in parentheses

* p < .10

** p < .05

*** p < .01

measures evaluated here.

Second, the same results offer moderate to strong support for the property rights hypothesis that ownership concentration and financial performance are unrelated.

While ownership concentration is actually negatively related to particular performance indices at the cross-national and within-country levels, the low R^2 's of these models (circa .12), coupled with the fact that ownership concentration is never significant on more than one performance measure for a given series of analyses, indicates that at best, the direct relationship between ownership concentration and performance is rather weak and highly sensitive to the choice of performance measure. That is, the relationship between ownership concentration and financial performance is not robust across alternative measures of performance.

6.2 Results: The Ownership Concentration-Financial Performance Moderated by National Context Relationship

The results of a series of MANCOVA's evaluating the moderating influence of national context on the ownership concentration-financial performance relationship are compiled in Tables 44-46 below. A series of ten MANCOVA's (ie. one model for each of all ten possible country-pairs) were run for each of the three performance measures considered in this study.

The results from these MANCOVA's are generally consistent

with the regression findings reported above and offer only weak support for the hypothesis that national context moderates the ownership concentration-performance relationship. This is to be expected because the majority of ownership concentration (LARGEST) regression coefficients reported above in Tables 39-43 are not significantly different from 0.

Some support for the moderation hypothesis is found in terms of the return on assets (ROA) and return on invested capital (ROIC) performance measures.

The relationship between ownership concentration and return on assets (ROA) in France is significantly different from the relationship in all other countries studied ($p < .01$ for France-Canada; $p < .001$ for France-Germany, U.K., and U.S.) (Table 44).

In terms of return on invested capital (ROIC) (Table 45), five country-pairs exhibit significant differences in their relationship between ownership concentration and financial performance; Canada-U.K. ($p < .05$), Germany-France ($p < .001$), France-U.S. ($p < .05$), U.K.-Germany ($p < .001$), and Germany-U.S. ($p < .05$).

Interestingly, none of the ten country-pairs exhibit a significant difference in their relationship between ownership concentration and total shareholder return (TOTRET) (Table 46). This finding suggests that the relationship between ownership concentration and stock market performance is less

Table 44

**MANCOVA Results: Ownership Concentration (LARGEST)
On Return on Assets (ROA)
F-Statistics and their Significance**

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	8.18 ^{***}			
GERMANY	0.79	12.95 ^{****}		
U.K.	1.04	10.22 ^{****}	1.17	
U.S.	1.48	26.83 ^{****}	0.43	0.10

- Country-pair significantly different at $p < .1$
- Country-pair significantly different at $p < .05$
- Country-pair significantly different at $p < .01$
- Country-pair significantly different at $p < .001$

Table 45

**MANCOVA Results: Ownership Concentration (LARGEST)
On Return on Invested Capital (ROIC)
F-Statistics and their Significance**

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	2.52			
GERMANY	2.38	12.10****		
U.K.	6.20**	0.04	12.46****	
U.S.	0.01	4.13**	4.81**	2.29

- Country-pair significantly different at $p < .1$
- .. Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

Table 46

**MANCOVA Results: Ownership Concentration (LARGEST)
On Total Shareholder Return (TOTRET)
F-Statistics and their Significance**

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	0.95			
GERMANY	1.42	0.01		
U.K.	0.40	0.49	0.03	
U.S.	1.46	0.11	0.40	0.47

- Country-pair significantly different at $p < .1$
- Country-pair significantly different at $p < .05$
- Country-pair significantly different at $p < .01$
- Country-pair significantly different at $p < .001$

sensitive to differences at the national-level than the relationship between ownership concentration and accounting profits.

The results presented here offer some weak and limited support for the hypothesized moderating influence of national context on the ownership concentration-financial performance relationship. While a number of country-pairs exhibit statistically different ownership concentration-performance relationships, these findings are generally not robust across alternative measures of financial performance. Perhaps of greater importance, no significant differences between countries are found when the market based measure total shareholder return (TOTRET) is used.

To a certain extent, weak support for the moderation hypothesis was expected given the regression results presented in Section 6.1. In that section, the majority of ownership concentration coefficients were found to be not statistically significant. Since this implies ownership concentration (LARGEST) coefficients which are not significantly different from 0, it is actually surprising that the moderation hypothesis received as much support as it did.

6.3 Results: The Ownership Concentration-Corporate Strategy Relationship

To evaluate the relationship between ownership concentration and firm strategy, a series of eight OLS models were estimated regressing ownership concentration on each of

the strategy indices included in this study. That is, separate models were fitted for each ownership concentration-strategy relationship at the cross-national (Table 47) and country-levels (Tables 48-52). As in the previous analyses, the effects of size, foreign control and industry context are controlled for in all these models. In the cross-national models, national context is also controlled for through a series of four indicator variables.

Corporate Growth

Regression results generally do not support the agency theory hypothesis of a negative relationship between ownership concentration and corporate growth (Hypothesis 2A).

Ownership concentration is not related to sales growth either at the cross-national level, or in the Canadian, French, German, or U.S. contexts.

Limited support for the agency theory hypothesis is found in the U.K., where ownership concentration is negatively related to sales growth ($p < .05$).

Notwithstanding the U.K. results, the overall pattern of findings offers stronger support for the organizational perspective's hypothesis of no significant relationship between ownership concentration and corporate growth (Hypothesis 2B) than its agency theory counterpart. Not only is there no relationship between ownership concentration and corporate growth in four of the five national contexts

Table 47

**Cross-National Regression Results:
Ownership Concentration (LARGEST) on Strategy***

	SALESG	FSALES	NBIZ	WD	RD	CAPFIX	PAYOUT	DEBTR
LARGEST	-.00003 (-.79)	-.003*** (-3.1)	-.003*** (-3.6)	-.001* (-1.8)	-.002*** (-3.9)	.015*** (2.7)	-.001*** (-5.6)	.0005*** (4.2)
LASSETS	-.004*** (-2.6)	.77*** (24.4)	.83*** (33.74)	.38*** (22.2)	.33*** (18.4)	-1.23*** (-6.9)	.029*** (3.6)	.07*** (19.54)
Intercept	2.06 (218.9)	-6.05 (-28.76)	-3.1 (-18.5)	-3.12 (-27.7)	-4.1 (-33.96)	22.6 (18.8)	1.25 (23.7)	.17 (6.9)
Adjusted R ²	.025	.34	.35	.20	.47	.10	.13	.28
F	6.53***	119.62***	139.5***	64.82***	217.77***	27.79***	25.34***	93.01***

* Regression coefficients are reported
T-Statistics reported in parentheses

Definitions for strategy variables are provided in Table 21.

⁺p < .10
^{**}p < .05
^{***}p < .01

Table 48
**Canada Regression Results:
 Ownership Concentration (LARGEST) on Strategy***

	SALESG	FSALES	NBIZ	WD	RD	CAPFIX	PAYOUT	DEBTR
LARGEST	.0002 (1.2)	-.074* (-1.6)	.012*** (5.5)	.005*** (6.6)	-.006** (-2.0)	.002*** (3.1)	.0001 (.15)	-.0006* (-1.9)
LASSETS	.006 (.90)	7.5*** (3.4)	.77*** (7.3)	.09*** (2.3)	.45*** (3.2)	.005 (.21)	.018 (.52)	.125*** (8.3)
Intercept	2.0 (56)	-31.87 (-2.5)	-1.8 (-2.9)	.33 (1.5)	-2.6 (-3.2)	.84 (5.6)	1.37 (6.7)	.0005 (.006)
Adjusted R ²	.04	.19	.35	.19	.60	.10	.07	.24
F	2.02***	6.72***	16.29***	7.7***	43.17***	4.09***	2.38***	10.05***

* Regression coefficients are reported
 T-Statistics reported in parentheses

Definitions for strategy variables are provided in Table 21.

* p < .10

** p < .05

*** p < .01

Table 49
 France Regression Results:
 Ownership Concentration (LARGEST) on Strategy^a

	SALESG	FSALES	NBIZ	WD	RD	CAPFIX	PAYOUT	DEBTR
LARGEST	.0001 (.92)	.189*** (3.76)	-.014*** (-5.04)	-.002** (-2.3)	.01*** (4.4)	-.005 (-.25)	-.004*** (-4.5)	.0004 (.53)
LASSETS	.017*** (2.43)	15.75*** (6.2)	1.04*** (7.5)	.35*** (7.2)	.59*** (5.7)	-1.6* (-1.7)	-.117*** (-2.8)	-.005 (-.13)
Intercept	1.89 (40.52)	-119.11 (-6.9)	-2.02 (-2.1)	-.68 (-2.02)	-6.9 (-9.8)	24.92 (3.9)	2.66 (9.1)	.92 (3.8)
Adjusted R ²	.06	.41	.33	.21	.31	.04	.23	.50
F	2.26***	15.51***	13.63***	7.59***	11.59***	1.9***	6.82***	9.22***

^a Regression coefficients are reported
 T-Statistics reported in parentheses

Definitions for strategy variables are provided in Table 21.

* p < .10

** p < .05

*** p < .01

Table 50
**Germany Regression Results:
 Ownership Concentration (LARGEST) on Strategy***

	SALESG	FSALES	NBIZ	WD	RD	CAFFIX	PAYOUT	DEBTR
LARGEST	-.0005 (-.56)	-.14*** (-4.1)	-.006*** (-3.3)	-.002*** (-3.15)	-.002 (-1.3)	-.001** (-2.1)	.13*** (2.3)	.001*** (3.8)
LASSETS	-.008* (-1.7)	13.63*** (6.97)	.996*** (9.7)	.144*** (4.3)	.71*** (8.7)	-.065*** (-2.8)	-4.43 (-1.4)	.135*** (9.3)
Intercept	2.07 (58.15)	-57.01 (-4.02)	-4.04 (-5.4)	-.101 (-4.22)	-7.08 (-12.0)	1.33 (7.8)	48.24 (2.03)	-.35 (-3.35)
Adjusted R ²	.15	.32	.27	.23	.45	.14	.22	.21
F	6.13***	14.98***	12.98***	10.56***	25.46***	4.4***	6.64***	9.78***

* Regression coefficients are reported
 T-Statistics reported in parentheses

Definitions for strategy variables are provided in Table 21.

* p < .10

** p < .05

*** p < .01

Table 51
**U.K. Regression Results:
 Ownership Concentration (LARGEST) on Strategy***

	SALESG	FSALES	NBIZ	WD	RD	CAFFIX	PAYOUT	DEBTR
LARGEST	-.0003** (-1.9)	-.003 (-1.2)	.002 (.72)	.002* (1.9)	.007** (1.95)	.014 (.81)	-.0005* (-1.5)	-.0006*** (-4.07)
LASSETS	-.026*** (-5.5)	.76*** (9.3)	1.04*** (13.6)	.29*** (7.3)	.74*** (6.3)	-3.2 (-5.7)	.05*** (3.9)	.017*** (3.4)
Intercept	2.27 (66.7)	-4.63 (-7.9)	-2.9 (-5.3)	-1.9 (-6.6)	-4.9 (-5.9)	40.12 (9.9)	1.05 (11.67)	.72 (20.7)
Adjusted R ²	.23	.27	.25	.13	.13	.097	.20	.15
F	8.24***	15.94***	15.71***	7.32***	7.8***	5.4***	10.88***	8.91***

* Regression coefficients are reported
 T-Statistics reported in parentheses

Definitions for strategy variables are provided in Table 21.

* p < .10

** p < .05

*** p < .01

Table 52
 U.S. Regression Results:
 Ownership Concentration (LARGEST) on Strategy^a

	SALESG	FSALES	NBIZ	WD	RD	CAPFIX	PAYOUT	DEBTR
LARGEST	-.00003 (-.48)	-.003** (-2)	-.005*** (-4.5)	-.003*** (-3.3)	-.003*** (-4.1)	.014* (1.6)	-.002*** (-5.5)	.0005*** (2.7)
LASSETS	-.003** (-2.03)	.78*** (21.14)	.70*** (24.82)	.40*** (17.37)	.28*** (13.75)	-.905*** (-4.2)	.05*** (4.6)	.08*** (18.0)
Intercept	2.06 (177.11)	-6.19 (-24.52)	-2.34 (-12.13)	-3.41 (-21.56)	-3.83 (-27.9)	21.45 (14.58)	1.15 (15.5)	.09 (3.1)
Adjusted R ²	.035	.35	.29	.17	.61	.12	.096	.16
F	6.88***	93.04***	77.05***	39.93***	273.98***	25.62***	12.62***	36.2***

^a Regression coefficients are reported
 T-Statistics reported in parentheses

Definitions for strategy variables are provided in Table 21.

* p < .10

** p < .05

*** p < .01

examined, but correlational analysis presented in Table 37 suggests that corporate growth is an outcome (performance variable) rather than a strategy variable.

Indeed, sales growth (SALESG) is significantly correlated ($p < .01$) with return on assets (ROA), return on invested capital (ROIC), and total shareholder return (TOTRET) across all national contexts examined in this study.

Diversification

Cross-national results strongly support the agency theory hypothesized negative relationship between ownership concentration and diversification (Hypothesis 3A).

That is, ownership concentration is negatively related to both NBIZ ($p < .01$) and WD ($p < .1$) measures of diversification.

Contrary to expectations, the relationship between ownership concentration and diversification in the U.K. is marginally positive (NBIZ NS, WD $p < .1$).

All other country-level results strongly support Hypothesis 3B. That is, ownership concentration is positively related to diversification in Canada (NBIZ, WD $p < .01$), but negatively related to diversification in France (NBIZ $p < .05$, WD $p < .01$), Germany (NBIZ, WD, $p < .01$) and the U.S. (NBIZ, WD $p < .01$).

Geographic Scope

Cross-national results strongly support the hypothesized relationship between ownership concentration and geographic scope (Hypothesis 4A).

As expected, ownership concentration is negatively related ($p < .01$) to the ratio of foreign to total sales (FSALES).

With a few exceptions, country-level results support Hypothesis 4B. As expected, ownership concentration is negatively related to foreign sales (FSALES) in Germany ($p < .01$) and the U.S. ($p < .05$), and is positively related to FSALES in France ($p < .01$). Contrary to expectations, ownership concentration exhibits a negative relationship with FSALES in Canada ($p < .1$). Also, ownership concentration is not significantly related to geographic scope in the U.K. context.

Research and Development Intensity

Cross-national results support Grabowski and Mueller's (1972) finding of a negative relationship between ownership concentration and corporate R&D expenditures (Hypothesis 5B).

That is, ownership concentration is negatively related ($p < .01$) to the ratio of R&D expenditures to total sales (RD).

Country-level analyses offer strong support for Hypothesis 5C. As expected, ownership concentration is negatively related to R&D intensity (RD) in Canada ($p < .05$)

and the U.S. ($p < .01$) and is positively related to RD in France ($p < .01$) and the U.K. ($p < .05$). No significant relationship exists between ownership concentration and R&D intensity in Germany.

Capital Expenditures

Cross-national results support Hill and Snell's (1989) contention that ownership concentration is positively related to capital expenditures (Hypothesis 6B).

At the cross-national level, ownership concentration is positively related to the ratio of capital expenditures to total net assets ($p < .01$).

Country-level analyses offer good support for Hypothesis 6C. As expected, while ownership concentration exhibits a positive relationship with capital expenditures (CAPFIX) in Canada ($p < .01$), and the U.S ($p < .1$), the relationship between these two variables is negative in Germany ($p < .05$). Contrary to expectations, there is no significant relationship between ownership concentration and capital expenditures in either France, or the U.K.

Dividend Payout Ratios

Cross-national analyses support Harris and Raviv's (1991) contention that there is a negative relationship between ownership concentration and dividend payout ratios (Hypothesis 7B).

That is, at the cross-national level there is a strong negative relationship between ownership concentration and payout ratios ($p < .01$).

Country-specific analyses offer a strong confirmation of Hypothesis 7C. As expected, the relationship between ownership concentration and payout ratios is negative in France ($p < .01$), the U.K. ($p < .1$), and the U.S. ($p < .01$), and the relationship between these two variables is positive in Germany ($p < .01$). Contrary to expectations, ownership concentration and dividend payout ratios are unrelated in Canada.

Financial Leverage

Cross-national analyses supports the hypothesized (Hypothesis 8A) positive relationship ($p < .01$) between ownership concentration and financial leverage (DEBTR).

Country-level analyses offers strong support for Hypothesis 8B. As expected, there is a positive relationship between ownership concentration and financial leverage in Germany ($p < .01$) and the U.S. ($p < .01$), and the relationship is negative in Canada ($p < .1$) and the U.K. ($p < .01$). Contrary to expectations, ownership concentration and financial leverage are not related in the French context.

Taken together, the results presented in this section suggest quite strongly that ownership concentration has a significant influence upon a wide range of strategic outcomes.

These results also suggest that there are material differences in the relationship between ownership concentration and various strategic dimensions across national contexts. The possible moderating effect of national context on the relationship between ownership concentration and corporate strategy is explicitly evaluated in the following section.

6.4 Results: The Ownership Concentration-Corporate Strategy Moderated by National Context Relationship

In order to test the general hypothesis that national context moderates the relationship between ownership concentration and corporate strategy, a series of MANCOVA's were run testing for differences between each country-pair in terms of each of the strategic outcomes considered here. These results are compiled and presented in Tables 53-60.

The MANCOVA results on sales growth (SALESG) (Table 53) are quite consistent with the regression results presented in Section 6.3.

The only country-pair in which a significant difference exists in terms of the ownership concentration-sales growth (SALESG) relationship is the U.K. and Germany ($p < .001$). This relatively weak support for the moderation hypothesis was expected given the generally non-significant results between ownership concentration and sales growth (SALESG).

MANCOVA results on all other strategic variables offer moderate to strong support for the hypothesis that national context moderates the relationship between ownership

Table 53

**MANCOVA Results: Ownership Concentration (LARGEST)
On Sales Growth (SALESG)
F-Statistics and their Significance**

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	0.03			
GERMANY	0.48	0.03		
U.K.	0.34	0.14	14.40****	
U.S.	0.20	1.30	0.46	0.06

- Country-pair significantly different at $p < .1$
- Country-pair significantly different at $p < .05$
- Country-pair significantly different at $p < .01$
- Country-pair significantly different at $p < .001$

Table 54

**MANCOVA Results: Ownership Concentration (LARGEST)
On Foreign Sales (FSALES)
F-Statistics and their Significance**

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	13.55****			
GERMANY	0.85	14.44****		
U.K.	11.26****	0.29	8.22***	
U.S.	20.85****	0.39	44.55****	10.09***

- Country-pair significantly different at $p < .1$
- .. Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

Table 55

**MANCOVA Results: Ownership Concentration (LARGEST)
On Number of SIC Codes (NBIZ)
F-Statistics and their Significance**

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	14.47 ^{***}			
GERMANY	0.71	5.70 ^{**}		
U.K.	1.11	7.05 ^{***}	0.12	
U.S.	17.51 ^{***}	4.35 [*]	3.17 [*]	0.17

- Country-pair significantly different at $p < .1$
- ** Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

Table 56

**MANCOVA Results: Ownership Concentration (LARGEST)
On Weighted Diversification (WD)
F-Statistics and their Significance**

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	8.97 ^{***}			
GERMANY	2.20	3.17 [*]		
U.K.	1.39	7.96 ^{***}	0.20	
U.S.	8.58 ^{***}	0.03	5.02 ^{**}	2.82 [*]

- Country-pair significantly different at $p < .1$
- ** Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

Table 57

**MANCOVA Results: Ownership Concentration (LARGEST)
On R&D Intensity (RD)
F-Statistics and their Significance**

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	10.42****			
GERMANY	5.02**	0.85		
U.K.	1.78	1.33	0.17	
U.S.	1.46	9.93***	2.50*	3.88**

- Country-pair significantly different at $p < .1$
- Country-pair significantly different at $p < .05$
- Country-pair significantly different at $p < .01$
- Country-pair significantly different at $p < .001$

Table 58

**MANCOVA Results: Ownership Concentration (LARGEST)
On Capital Expenditures (CAPFIX)
F-Statistics and their Significance**

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	0.85			
GERMANY	5.52**	0.35		
U.K.	0.08	2.21	3.46*	
U.S.	1.96	5.21**	3.68**	0.12

- Country-pair significantly different at $p < .1$
- ** Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

Table 59

**MANCOVA Results: Ownership Concentration (LARGEST)
On Dividend Payout Ratio (PAYOUT)
F-Statistics and their Significance**

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	0.67			
GERMANY	5.14**	9.88***		
U.K.	7.80***	0.84	2.34*	
U.S.	4.11**	7.09***	34.55****	16.72****

- Country-pair significantly different at $p < .1$
- ** Country-pair significantly different at $p < .05$
- *** Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

Table 60

**MANCOVA Results: Ownership Concentration (LARGEST)
On Debt Ratio (DEBTR)
F-Statistics and their Significance**

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	21.41****			
GERMANY	27.66****	3.15*		
U.K.	23.91****	14.23****	2.80*	
U.S.	27.84****	1.28	0.28	2.39

- Country-pair significantly different at $p < .1$
- .. Country-pair significantly different at $p < .05$
- ... Country-pair significantly different at $p < .01$
- **** Country-pair significantly different at $p < .001$

concentration and corporate strategy.

The results in Table 54 offers a strong indication that national context moderates the relationship between ownership concentration and the ratio of foreign to total sales (FSALES). In fact five of ten country-pairs (ie. Canada-France, Canada-U.K, Canada-U.S., France-Germany, and Germany-U.S) exhibit significantly different ownership concentration-foreign sales relationships at $p < .001$. In addition, two other country-pairs (Germany-U.K. and U.K.-U.S) are statistically different at $p < .01$.

Tables 55 and 56 offer convincing evidence that national context moderates the relationship between ownership concentration and corporate diversification. Five of ten country-pairs (ie. Canada-France, Canada-U.S., France-Germany, France-U.K., France-U.S., Germany-U.S.) exhibit significant differences (at least $p < .1$) in their relationship between ownership concentration and the number of SIC codes (NBIZ) in which a firm operates.

Six of ten country-pairs (ie. Canada-France, Canada-U.S., France-Germany, France-U.K., Germany-U.S., and U.K.-U.S.) exhibit significantly different relationships between ownership concentration and the weighted diversification measure (WD) (at least $p < .1$).

Similarly, national context moderates the relationship between ownership concentration and R&D intensity (Table 57). That is, five of ten country-pairs (ie. Canada-France, Canada-

Germany, France-U.S., Germany-U.S., and U.S.-U.K.) exhibit statistically dissimilar relationships between ownership concentration and R&D intensity (at least $p < .1$).

National context also moderates the relationship between ownership concentration and capital expenditures (CAPFIX) (Table 58). The relationship between ownership concentration and CAPFIX is statistically different in four of ten possible country-pairs. In particular, Canada-Germany, France-U.S., Germany-U.K., and Germany-U.S. have different ownership concentration-capital expenditure (CAPFIX) relationships (at least $p < .1$).

Many differences across national contexts are also apparent in the relationship between ownership concentration and payout ratios (PAYOUT) (Table 59). That is, eight out of a possible ten country-pairs (ie. Canada-Germany, Canada-U.K., Canada-U.S., France-Germany, France-U.S., Germany-U.K., Germany-U.S., and U.K.-U.S.) have significantly different relationships between ownership concentration and dividend payout ratios (at least $p < .1$).

Finally, differences also exist in the relationship between ownership concentration and financial leverage (DEBTR) (Table 60). Seven of ten possible country-pairs (ie. Canada-France, Canada-Germany, Canada-U.K., Canada-U.S., France-Germany, France-U.K., and Germany-U.K.) exhibit different relationships in their ownership concentration-financial leverage relationships (at least $p < .1$).

Taken together, the results in this section strongly support the conjectured moderating influence of national context on the relationship between ownership concentration and corporate strategy. These results also carry the practical implication that ownership concentration and corporate strategy relationships are not readily generalizable across national contexts. This important issue will be discussed at greater length in Chapter 7.

6.5 Results: The Ownership Concentration-Corporate Strategy-Financial Performance Relationship

As discussed in Section 4.3, in order to establish that a variable mediates the relationship between two other variables, there must be a main-effect between the dependent and independent variable (Barron & Kenny, 1986). In the context of this study, this means that to be able to establish that strategy mediates the relationship between ownership concentration and performance, there must first be a main effect between ownership and performance.

As reported above in Section 6.1 and Tables 38-43, no consistent relationship is apparent between ownership concentration and corporate financial performance. This finding holds both at the cross-national, and the country-specific levels. Consequently, it was not possible to test for mediation using Barron and Kenny's criteria.

Taken together, the findings reported thus far are troublesome. First, it was found that ownership concentration

is generally unrelated to corporate financial performance. Subsequently, it was found that ownership concentration is significantly related to a number of strategic outcomes. These findings seem to imply that corporate strategy is unrelated to corporate financial performance.

In order to explore this issue further and to assess whether the strategy variables included in this study are related to financial performance, a series of 24 OLS models were estimated at the cross-national, and country-specific levels in which the eight strategy variables used in this study were regressed on three measures of financial performance. These results are displayed in Tables 61-66.

These results demonstrate quite clearly that many of the dimensions of strategy operationalized here are significant predictors of corporate financial performance.

At the cross-national level (Table 61), corporate growth and capital expenditures are both positively related to at least two of three measures of financial performance ($p < .01$). Geographic scope, diversification (NBIZ & WD), dividend payout ratios (PAYOUT) and financial leverage (DEBTR) are negatively related to at least two, of the three indicators of financial performance considered in this study ($p < .01$).

Country-level results also demonstrate that many of the strategic outcomes considered here are significantly related to corporate financial performance.

In Canada (Table 62), corporate growth (SALESG),

Table 61

**Cross-National Regression Results:
Strategy on Performance***

	ROA	ROIC	TOTRET
SALESG	.105*** (13.4)	.16*** (18.1)	.22*** (7.5)
R²	.28	.20	.14
F	67.38***	44.45***	30.03***
FSALES	.007 (1.1)	-.026*** (-3.1)	.004 (.14)
R²	.24	.13	.12
F	55.41***	27.75***	24.45***
NBIZ	-.28*** (-2.7)	-.65*** (-5.2)	-.53 (-1.4)
R²	.22	.14	.12
F	56.44***	32.57***	27.76***
WD	-1.39*** (-5.3)	-1.96*** (-6.2)	-1.12 (-1.2)
R²	.23	.14	.12
F	57.65***	33.13***	27.73***

* Regression coefficients are reported
T-Statistics reported in parentheses

Variable definitions are provided in Table 21

. p < .10
* p < .05
*** p < .01

Table 61 Cont'd

**Cross-National Regression Results:
Strategy on Performance^a**

	ROA	ROIC	TOTRET
RD	.065 (1.2)	.04 (.6)	.07 (.34)
R ²	.23	.14	.12
F	55.31***	31.14***	25.73***
CAPFIX	.22*** (13.78)	.33*** (17.7)	.084 (1.4)
R ²	.26	.20	.12
F	65.47***	46.18***	27.14***
PAYOUT	-.07*** (-17.8)	-.09*** (-18.54)	-.17*** (-10.2)
R ²	.44	.23	.19
F	113.67***	44.37***	34.26***
DEBTR	-18.1*** (-29.2)	-11.7*** (-11.9)	-13.7*** -4.6
R ²	.23	.16	.12
F	56.6***	37.07***	25.45***

^a Regression coefficients are reported
T-Statistics reported in parentheses

Variable definitions are provided in Table 21

. p < .10
* p < .05
*** p < .01

Table 62

**Canada Regression Results:
Strategy on Performance^a**

	ROA	ROIC	TOTRET
SALESG	.08*** (3.4)	.12*** (4.7)	.1 (1.1)
R²	.14	.16	.18
F	4.4***	4.9***	5.8***
FSALES	-.03 (-1.5)	-.05** (-2.3)	-.09 (-1.5)
R²	.1	.11	.17
F	3.1***	3.3***	4.88***
NBIZ	.68** (2.2)	5.9* (1.6)	.57 (.51)
R²	.11	.09	.17
F	3.7***	3.23***	5.6***
WD	.67 (.75)	1.1 (1.1)	3.5 (1.1)
R²	.1	.09	.17
F	3.4***	3.14***	5.65***

^a Regression coefficients are reported
T-Statistics reported in parentheses

Variable definitions are provided in Table 21

* p < .10
** p < .05
*** p < .01

Table 62 Cont'd

**Canada Regression Results:
Strategy on Performance^a**

	ROA	ROIC	TOTRET
RD	-.23 (-.93)	.27 (.97)	-.02 (-.02)
R ²	.09	.07	.17
F	3.27***	2.8***	5.38***
CAPFIX	.11** (2.2)	.13** (2.2)	-.06 (-.3)
R ²	.11	.1	.16
F	3.71***	3.4***	5.41***
PAYOUT	-.06*** (-4.9)	-.07*** (-5.1)	-.17*** (-3.2)
R ²	.19	.16	.22
F	4.66***	3.97***	5.32***
DEBTR	-16.68*** (-7.2)	-9.87*** (-3.6)	-.24*** (-2.8)
R ²	.20	.11	.18
F	6.7***	3.88***	6.1***

^a Regression coefficients are reported
T-Statistics reported in parentheses

Variable definitions are provided in Table 21

* p < .10
** p < .05
*** p < .01

Table 63

**France Regression Results:
Strategy on Performance^a**

	ROA	ROIC	TOTRET
SALESG	.23*** (3.1)	.10*** (4.3)	.16 (1.3)
R²	.20	.18	.44
F	4.6***	4.05***	12.01***
FSALES	.23*** (4.5)	.07*** (3.9)	-.07 (-.72)
R²	.33	.30	.37
F	7.05***	6.3***	8.35***
NBIZ	1.17 (1.2)	.32 (.96)	-.96 (-.56)
R²	.18	.19	.40
F	4.46***	4.78***	11.6***
WD	-5.1** (-1.9)	-1.9** (-2.2)	-.84 (-.2)
R²	.19	.20	.40
F	4.63***	5.1***	11.54***

^a Regression coefficients are reported
T-Statistics reported in parentheses

Variable definitions are provided in Table 21

. p < .10
* p < .05
*** p < .01

Table 63 Cont'd

**France Regression Results:
Strategy on Performance^a**

	ROA	ROIC	TOTRET
RD	1.2 (1.2)	.47 (1.5)	1.3 (.8)
R ²	.18	.20	.39
F	4.37***	4.9***	11.0***
CAPFIX	.62*** (3.4)	.26*** (4.7)	-.38** (-1.3)
R ²	.21	.25	.42
F	5.1***	6.0***	11.79***
PAYOUT	-.25*** (-7.1)	-.07*** (-5.8)	-.17** (-2.4)
R ²	.31	.25	.48
F	6.82***	5.41***	12.94***
DEBTR	-16.20*** (-3.4)	-3.98 (-1.4)	-14.22 (-.71)
R ²	.39	.25	.36
F	4.32***	2.72***	3.99***

^a Regression coefficients are reported
T-Statistics reported in parentheses

Variable definitions are provided in Table 21

· p < .10
· p < .05
· p < .01

Table 64

**Germany Regression Results:
Strategy on Performance^a**

	ROA	ROIC	TOTRET
SALESG	.009 (.32)	.02 (.41)	.13 (1.2)
R²	.11	.12	.42
F	2.76***	2.98***	11.63***
FSALES	.03 (1.3)	.01 (.32)	.08 (.96)
R²	.11	.12	.45
F	2.66***	2.85***	12.42***
NBIZ	-.13 (-3.5)	-.05 (-.08)	-.44 (-.3)
R²	.097	.11	.43
F	2.64***	2.94***	12.51***
WD	-2.3 [*] (-1.6)	-.65 (-.29)	.42 (.07)
R²	.11	.11	.43
F	2.8***	2.95***	12.51***

^a Regression coefficients are reported
T-Statistics reported in parentheses

Variable definitions are provided in Table 21

^{*}p < .10
^{**}p < .05
^{***}p < .01

Table 64 Cont'd

**Germany Regression Results:
Strategy on Performance^a**

	ROA	ROIC	TOTRET
RD	.21 (1.1)	.27 (.95)	.33 (.39)
R ²	.15	.17	.41
F	3.44***	3.89***	10.78***
CAPFIX	.1 (1.2)	.07 (.57)	.34 (1.2)
R ²	.15	.22	.54
F	2.84***	3.98***	13.17***
PAYOUT	-.06*** (-4.4)	-.07*** (-4.5)	-.17*** (-2.7)
R ²	.21	.28	.44
F	4.37***	5.98***	11.35***
DEBTR	-17.5*** (-6.2)	-9.12** (-1.9)	3.6 (.29)
R ²	.21	.13	.43
F	5.13***	3.2***	12.51***

^a Regression coefficients are reported
T-Statistics reported in parentheses

Variable definitions are provided in Table 21

.^{*}p < .10
.^{**}p < .05
.^{***}p < .01

Table 65

**U.K. Regression Results:
Strategy on Performance^a**

	ROA	ROIC	TOTRET
SALESG	.04*** (2.8)	.19*** (5.6)	.11 (1.2)
R²	.15	.21	.12
F	4.6***	6.5***	3.8***
FSALES	.006 (.86)	-.02 (-1.0)	-.06 (-1.0)
R²	.096	.13	.14
F	4.26***	5.6***	6.17***
NBIZ	-.31*** (-2.6)	-1.24*** (-3.4)	-1.17 (-1.3)
R²	.12	.14	.14
F	5.6***	6.59***	6.35***
WD	-1.38*** (-3.9)	-4.7*** (-4.4)	-2.2 (-.83)
R²	.13	.15	.14
F	6.15***	7.1***	6.29***

^a Regression coefficients are reported
T-Statistics reported in parentheses

Variable definitions are provided in Table 21

. p < .10
. p < .05
*** p < .01

Table 65 Cont'd

**U.K. Regression Results:
Strategy on Performance^a**

	ROA	ROIC	TOTRET
RD	.12 [*] (1.8)	.57 ^{***} (2.8)	.96 [*] (1.9)
R ²	.11	.14	.14
F	5.38 ^{***}	6.33 ^{***}	6.47 ^{***}
CAPFIX	.09 ^{***} (5.5)	.4 ^{***} (8.4)	-.25 ^{**} (-1.9)
R ²	.16	.21	.15
F	7.06 ^{***}	9.9 ^{***}	6.6 ^{***}
PAYOUT	-.06 ^{***} (-8.4)	-.2 ^{***} (-9.4)	-.31 ^{***} (-5.4)
R ²	.21	.25	.17
F	9.7 ^{***}	12.16 ^{***}	7.7 ^{***}
DEBTR	-12.04 ^{***} (-6.7)	21.52 ^{***} (3.8)	-12.76 (-.91)
R ²	.17	.15	.14
F	8.05 ^{***}	6.77 ^{***}	6.30 ^{***}

^a Regression coefficients are reported
T-Statistics reported in parentheses

Variable definitions are provided in Table 21

^{*}p < .10
^{**}p < .05
^{***}p < .01

Table 66

**U.S. Regression Results:
Strategy on Performance***

	ROA	ROIC	TOTRET
SALESG	.11*** (14.1)	.17*** (15.96)	.25*** (6.8)
R²	.16	.17	.13
F	27.46***	30.54***	22.31***
FSALES	-.01 (-1.2)	-.024** (-1.9)	.05 (1.3)
R²	.09	.09	.11
F	14.37***	14.38***	17.34***
NBIZ	-.68*** (-5.8)	-.91*** (-5.6)	-.58 (-1.2)
R²	.10	.10	.11
F	17.23***	17.31***	19.02***
WD	-1.4*** (-5.3)	-2.11*** (-5.6)	-2.1* (-1.8)
R²	.096	.098	.11
F	16.9***	17.31***	19.13***

* Regression coefficients are reported
T-Statistics reported in parentheses

Variable definitions are provided in Table 21

* p < .10
** p < .05
*** p < .01

Table 66 Cont'd

**U.S. Regression Results:
Strategy on Performance^a**

	ROA	ROIC	TOTRET
RD	.08 (1.4)	-.003 (-.043)	.04 (.17)
R ²	.09	.09	.11
F	14.77***	15.16***	17.45***
CAPFIX	.24*** (14.3)	.33*** (14.58)	.15** (1.98)
R ²	.15	.16	.11
F	27.52***	28.92***	19.22***
PAYOUT	-.05*** (-13.95)	-.08*** (-15.12)	-.17*** (-8.5)
R ²	.21	.18	.19
F	27.88***	23.04***	24.12***
DEBTR	-18.82*** (-24.74)	-15.11*** (-13.5)	-13.38*** (-3.8)
R ²	.26	.15	.11
F	51.92***	26.47***	19.75***

^a Regression coefficients are reported
T-Statistics reported in parentheses

Variable definitions are provided in Table 21

. p < .10
. p < .05
*** p < .01

diversification (NBIZ) and capital expenditures (CAPFIX) are positively related to at least two indicators of financial performance ($p < .01$). Dividend payout ratios (PAYOUT) and financial leverage (DEBTR) are negatively related ($p < .01$) to all three measures of financial performance used in this study. Further, foreign sales (FSALES) exhibits a negative relationship to return on invested capital (ROIC) ($p < .05$).

In France (Table 63), corporate growth (SALESG), foreign sales (FSALES) and capital expenditures (CAPFIX) are positively related ($p < .01$) to at least two of three measures of financial performance. In the French context, diversification (WD), dividend payout ratios (PAYOUT) and financial leverage (DEBTR) are negatively related to at least one measure of financial performance ($p < .05$).

The German context exhibits the fewest significant links between corporate strategy and performance (Table 64). Still, among German firms, diversification (WD), dividend payout ratios (PAYOUT) and financial leverage (DEBTR) are negatively related to at least one measure of financial performance ($p < .1$).

In the U.K. (Table 65), corporate growth (SALESG), R&D intensity (RD), and capital expenditures (CAPFIX) are all positively related to a least two measures of financial performance ($p < .1$). U.K. firms exhibit a negative relationship between diversification (NBIZ and WD), dividend payout ratios (PAYOUT), financial leverage (DEBTR) and at

least one measure of financial performance ($p < .01$).

Amongst U.S. firms (Table 66), corporate growth (SALESG), and capital expenditures (CAPFIX) are positively related to all three measures of financial performance ($p < .05$). Foreign sales (FSALES), diversification (NBIZ and WD), dividend payout ratios (PAYOUT) and financial leverage (DEBTR) are all negatively related to at least one measure of financial performance within the U.S. context ($p < .05$).

Taken together, the results presented in Tables 61-66 carry several important implications.

First, these results suggest quite strongly that there are a number of significant relationships between corporate strategy and financial performance at the cross-national and country-specific levels.

Second, although no consistent main effect between ownership concentration and financial performance exists at either the cross-national, or country-specific levels, two other sets of relationships are apparent. That is, in Section 6.3, it was reported that ownership concentration is a significant predictor of corporate strategy. Further, earlier in this section, it was demonstrated that corporate strategy is a significant predictor of corporate financial performance.

In other words, the results presented thus far indicate that while ownership concentration is not directly related to financial performance, ownership concentration is related to several dimensions of corporate strategy. That is, ownership

concentration influences the strategic choices made by firms. Further, many of these strategic choices significantly influence corporate financial performance.

While a significant ownership concentration-corporate strategy relationship and a significant corporate strategy-financial performance relationship is not sufficient to establish that strategy mediates the ownership concentration-financial performance relationship (Barron & Kenny, 1986), it does indicate that there is some sort of indirect relationship between ownership concentration and financial performance.

Indeed, the weight of the theoretical support from agency theory and strategic management discussed in Section 3.2(C), as well as the convergence of the findings presented here using alternative measures at different levels suggest that the indirect relationship between ownership concentration and financial performance observed here is probably not spurious.

That is, while the results presented here do not satisfy the technical criteria for mediation set forth by Barron and Kenny (1986), they do offer some support for the hypothesized indirect link between ownership concentration and corporate financial performance¹. Tables 67-72 illustrate many indirect relationships between ownership concentration and financial

¹ As such, I will avoid using the term 'mediation' in describing the ownership concentration-strategy-financial performance relationship. Instead, I will use the term 'indirect relationship' which does not imply that there is a direct relationship between ownership concentration and financial performance.

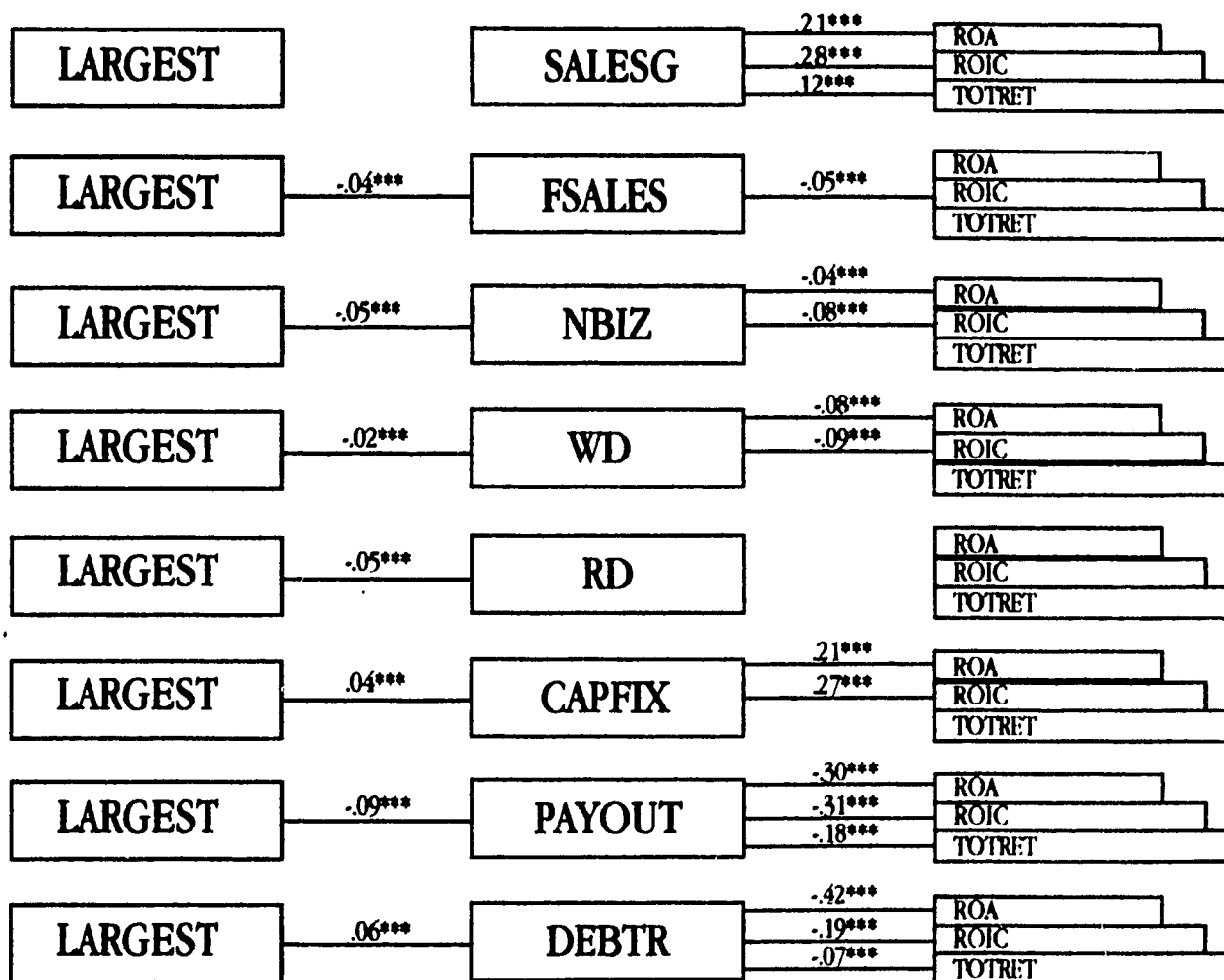
performance at the cross-national as well as country-specific levels.

In these tables, the paths are marked by partial correlation coefficients between two measures after controlling for national context (in the cross-national analyses), firm size, foreign control and industry context.

The cross-national analyses presented in Table 67, indicate six significant ownership concentration-strategy-performance relationships. That is, ownership concentration is negatively related to foreign sales (FSALES), diversification (NBIZ and WD), and dividend payout ratios (PAYOUT) (at least $p < .01$). In turn, these strategic outcomes are negatively related to at least one measure of financial performance ($p < .01$). Also, ownership concentration is positively related to financial leverage (DEBTR) ($p < .01$) and DEBTR is negatively related to all three measures of financial performance ($p < .01$). Finally, ownership concentration is positively related to capital expenditures (CAPFIX) ($p < .01$) and CAPFIX is positively related to two of three measures of financial performance ($p < .01$).

In the Canadian context (Table 68), four significant ownership concentration-strategy-performance relationships are apparent. Ownership concentration is negatively related to both foreign sales (FSALES) and financial leverage (DEBTR), and these two strategic outcomes are negatively related to at least one measure of financial performance ($p < .05$). Further,

Table 67
**Cross-National Partial Correlations:
 Ownership-Strategy-Performance**



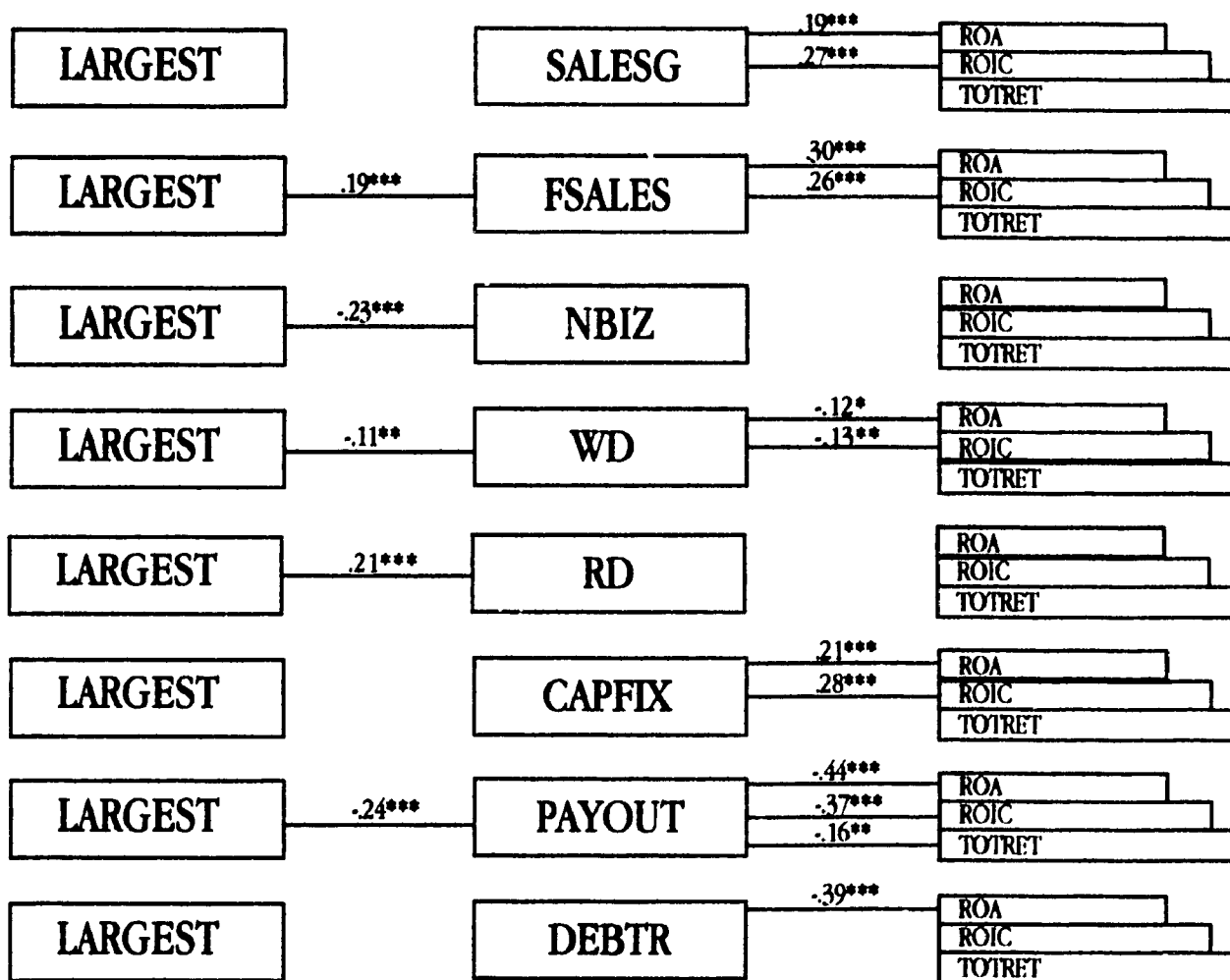
. p < .10
 .. p < .05
 *** p < .01

Table 68
Canada- Partial Correlations
Ownership-Strategy-Performance

LARGEST		SALESG	.17*** .24***	ROA ROIC TOTRET
LARGEST	-.07*	FSALES	-.13**	ROA ROIC TOTRET
LARGEST	.24***	NBIZ	.11** .08*	ROA ROIC TOTRET
LARGEST	.26***	WD		ROA ROIC TOTRET
LARGEST		RD		ROA ROIC TOTRET
LARGEST	.09**	CAPFIX	.11** .11**	ROA ROIC TOTRET
LARGEST		PAYOUT	-.29*** -.30*** -.19***	ROA ROIC TOTRET
LARGEST	-.07*	DEBTR	-.34*** -.18*** -.14***	ROA ROIC TOTRET

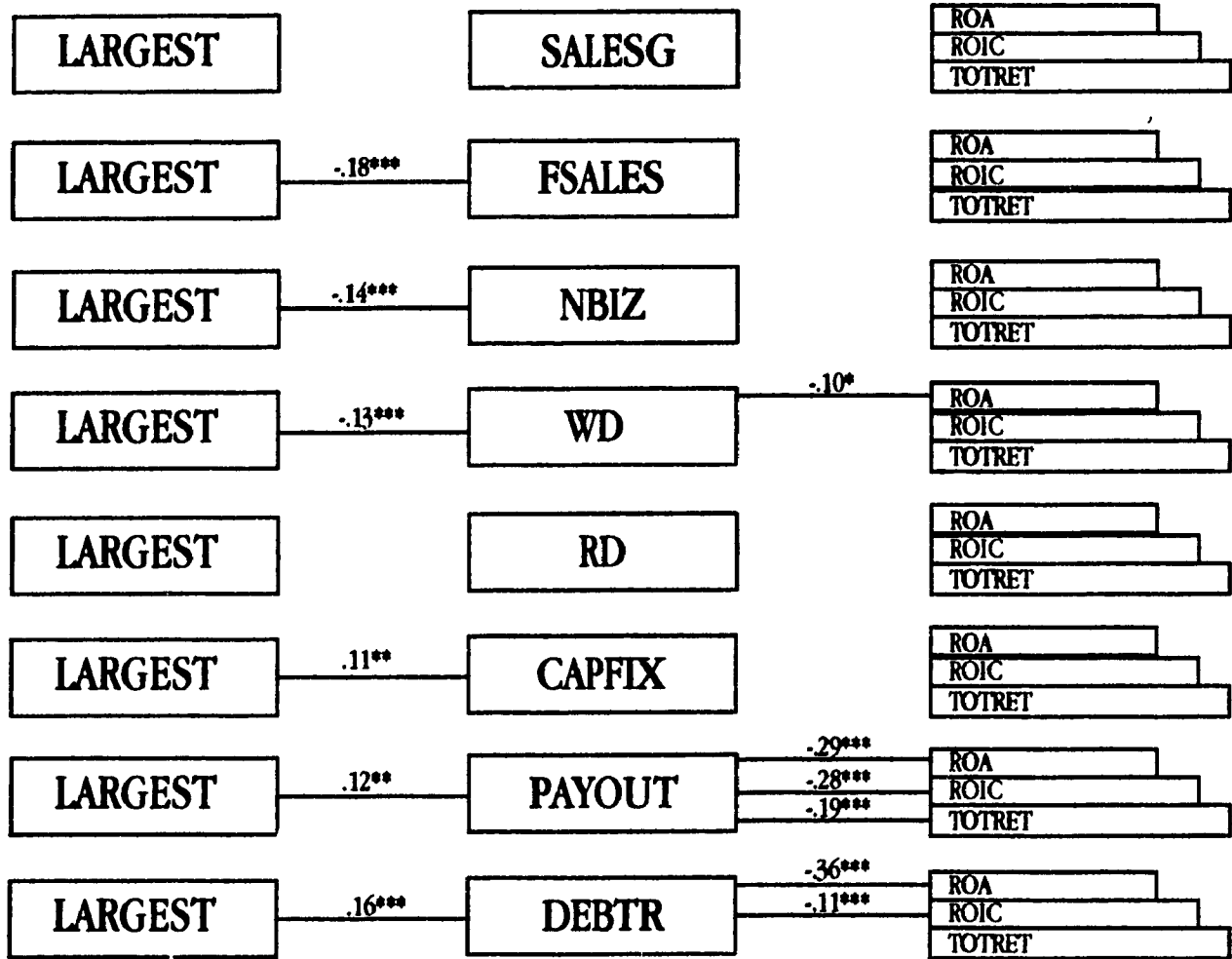
*p < .10
 **p < .05
 ***p < .01

Table 69
**France- Partial Correlations
 Ownership-Strategy-Performance**



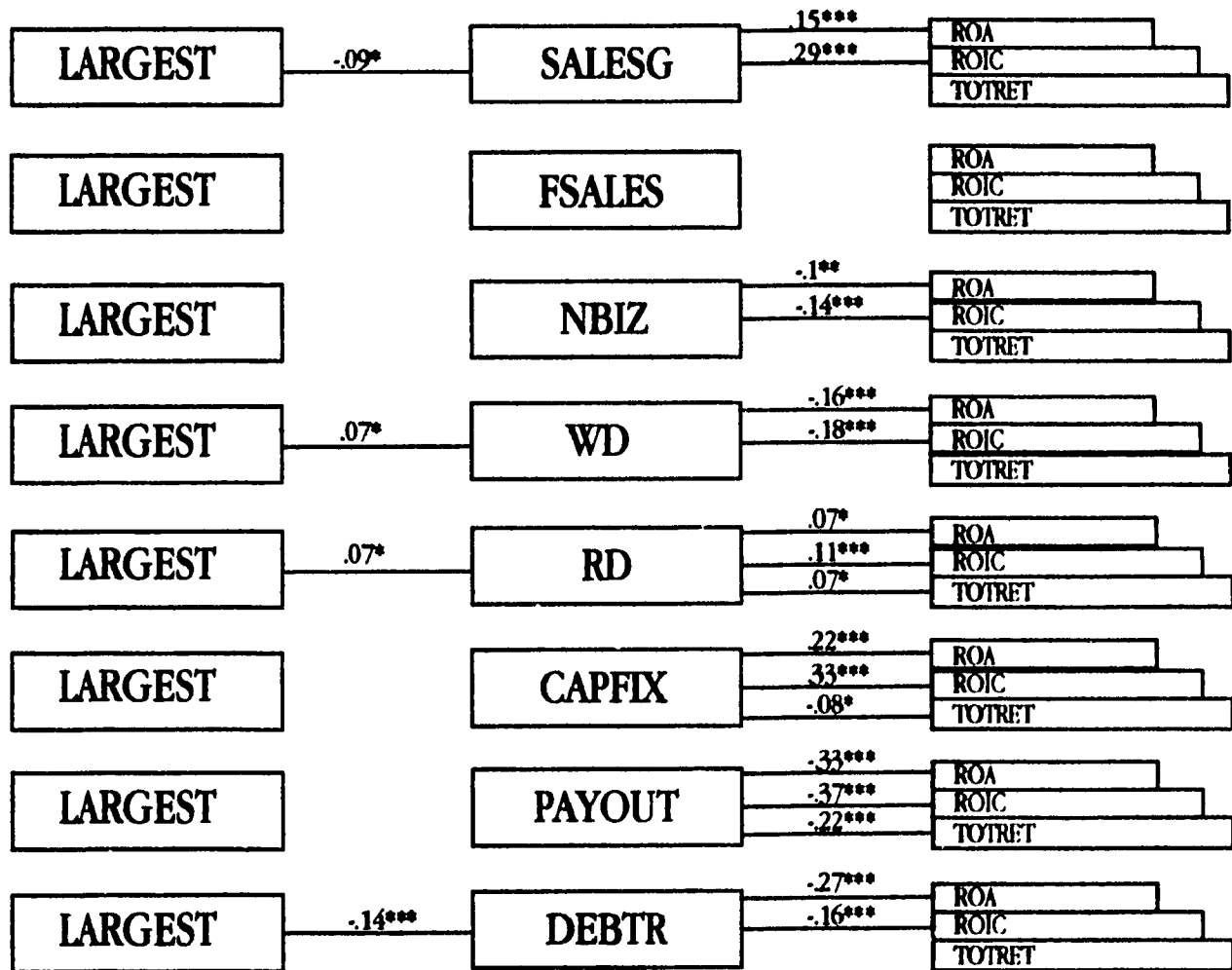
*p < .10
 **p < .05
 ***p < .01

Table 70
Germany- Partial Correlations
Ownership-Strategy-Performance



* p < .10
 ** p < .05
 *** p < .01

Table 71
U.K. - Partial Correlations
Ownership-Strategy-Performance



*p < .10
 **p < .05
 ***p < .01

**U.S. - Partial Correlations
Ownership-Strategy-Performance**

LARGEST		SALESG	.27*** .30*** .13***	ROA ROIC TOTRET
LARGEST	-.04**	FSALES	-.04*	ROA ROIC TOTRET
LARGEST	-.08***	NBIZ	-.11*** -.11***	ROA ROIC TOTRET
LARGEST	-.06***	WD	-.10*** -.11*** -.04*	ROA ROIC TOTRET
LARGEST	-.07***	RD		ROA ROIC TOTRET
LARGEST		CAPFIX	.27*** .27*** .04*	ROA ROIC TOTRET
LARGEST	-.12***	PAYOUT	-.32*** -.34*** -.20***	ROA ROIC TOTRET
LARGEST	.05***	DEBTR	-.43*** -.25*** -.07***	ROA ROIC TOTRET

· p < .10
 ** p < .05
 *** p < .01

ownership concentration is positively related to diversification (NBIZ) and capital expenditures (CAPFIX) and both diversification (NBIZ) and (CAPFIX) are positively related to the two accounting based measures of performance ($p < .1$).

Three significant ownership concentration-strategy-performance relationships exist in France (Table 69). In the French context, ownership concentration is positively related to foreign sales (FSALES) ($p < .01$) and FSALES is positively related to two of three measures of financial performance ($p < .01$). Also, ownership concentration is negatively related to both diversification (WD) ($p < .05$) and dividend payout ratios (PAYOUT) ($p < .01$). These two strategy variables are negatively related to at least two of three performance measures ($p < .1$).

Three significant ownership concentration-strategy-performance relationships are also apparent in the German context (Table 70). Ownership concentration is negatively related ($p < .01$) to diversification (WD) and WD is negatively related to corporate return on assets (ROA) ($p < .1$). Further, ownership concentration is positively related to both dividend payout ratios (PAYOUT) ($p < .05$) and financial leverage (DEBTR) ($p < .01$). Both payout ratios (PAYOUT) and financial leverage (DEBTR) are negatively related to at least two of three measures of financial performance ($p < .01$).

Four significant ownership concentration-strategy-

performance relationships are apparent in the U.K. context (Table 71). Ownership concentration is negatively related to corporate growth (SALESG) ($p < .1$) and SALESG is positively related to both accounting measures of financial performance ($p < .01$). Ownership concentration is positively related to diversification (WD) ($p < .1$) and negatively related to financial leverage (DEBTR) ($p < .01$) and both WD and DEBTR are negatively related to two of three measures of financial performance ($p < .01$). Finally, ownership concentration is positively related to R&D intensity (RD) ($p < .1$) and RD is positively related to all three measures of financial performance ($p < .1$).

Five significant ownership concentration-strategy-performance relationships are apparent in the U.S. context (Table 72). Ownership concentration is negatively related to foreign sales (FSALES) ($p < .05$), diversification (NBIZ and WD) ($p < .01$), and dividend payout ratios (PAYOUT) ($p < .01$) and each of these strategy variables are negatively related to at least one measure of financial performance ($p < .1$). Also, ownership concentration is positively related to financial leverage (DEBTR) ($p < .01$) and DEBTR is negatively related to all three measures of corporate financial performance ($p < .01$).

Taken together, these results offer some good support for the hypothesized ownership concentration-strategy-performance relationship (Hypothesis 9).

That is, while there is no consistent direct relationship between ownership concentration and financial performance, ownership concentration does influence many of the strategic variables which influence corporate financial performance. This issue is discussed at greater length in Chapter 7.

Further, the entire ownership concentration-strategy-performance relationship appears to vary across national contexts (Hypothesis 10).

That is, the significance, magnitude and direction of particular ownership concentration-strategy-performance relationships vary from country to country. These findings have important implications regarding the generalizability of corporate governance findings across national contexts and will be discussed at length in chapter 7.

6.6 The Relationship Between Ownership Concentration and Firm Performance Revisited

Notwithstanding the mixed and inconclusive findings that punctuate the corporate governance literature (Section 2.1.2), the U.S. results are especially striking since Berle and Means (1932) separation of ownership and control thesis is patterned after the U.S. institutional context. Also, the agency theory view is supported by the relatively low levels of ownership concentration found in the U.S. relative to other countries (Table 23).

In order to further probe the relationship between ownership concentration and firm performance in the U.S.

context, some ancillary analyses were conducted.

Specifically, the question of whether the relationship between ownership concentration and performance is non-linear was evaluated by regressing both the ownership concentration term `LARGEST` and its square (ie. `LARGEST2`) on each of the three performance measures considered in this study. As in all previous analyses, firm size, foreign control, business cycle as well as industry context were controlled for in each of these three models. The results from these tests are provided in Table 73 and Figures 7-9.

The results contained in Table 73 indicate that there is in fact a curvilinear relationship between ownership concentration and financial performance in the U.S. context. Also, the regression estimates of `LARGEST` and `LARGEST2` are fairly consistent in terms of direction and magnitude across the three measures of financial performance. This suggests that the curvilinear relationship is robust across alternative measures of financial performance.

Specifically, in all three models, the ownership concentration (`LARGEST`) term is negative and the `LARGEST2` term is positive. In the return on assets (ROA) and return on invested capital (ROIC) models, both `LARGEST` and `LARGEST2` are statistically significant at $p < .1$. In the total shareholder return (TOTRET) model, `LARGEST` is significant at $p < .05$, but `LARGEST2` does not meet traditional significance levels (ie. $p < .17$). These results suggest that the relationship between

Table 73

**U.S. Regression Results:
Ownership Concentration (LARGEST) and (LARGEST²)
On Performance^a**

	ROA	ROIC	TOTRET
LARGEST	-.09*** (-3.56)	-.067* (-1.67)	-.187** (-1.97)
LARGEST ²	.001*** (4.06)	.001** (1.91)	.001 (1.36)
Intercept	9.73*** (6.09)	3.11 1.24	2.05 (.34)
Adjusted R ²	.076	.056	.11
F	13.89***	11.16***	18.76***

^a Regression coefficients are reported
T-Statistics reported in parentheses

* p < .10
** p < .05
*** p < .01

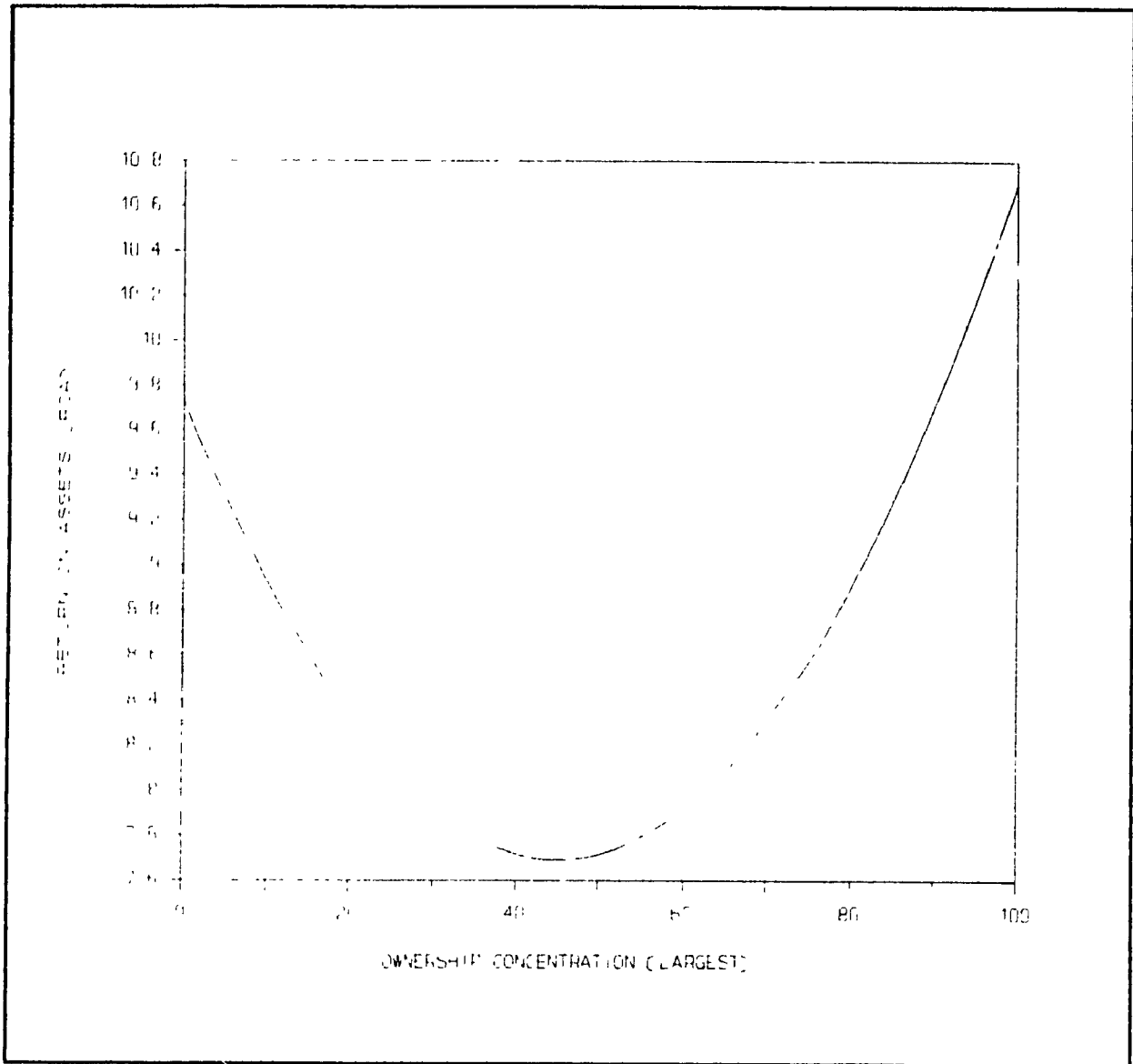


Figure 7: Regression Results: Ownership Concentration (LARGEST) On Return on Assets (ROA)

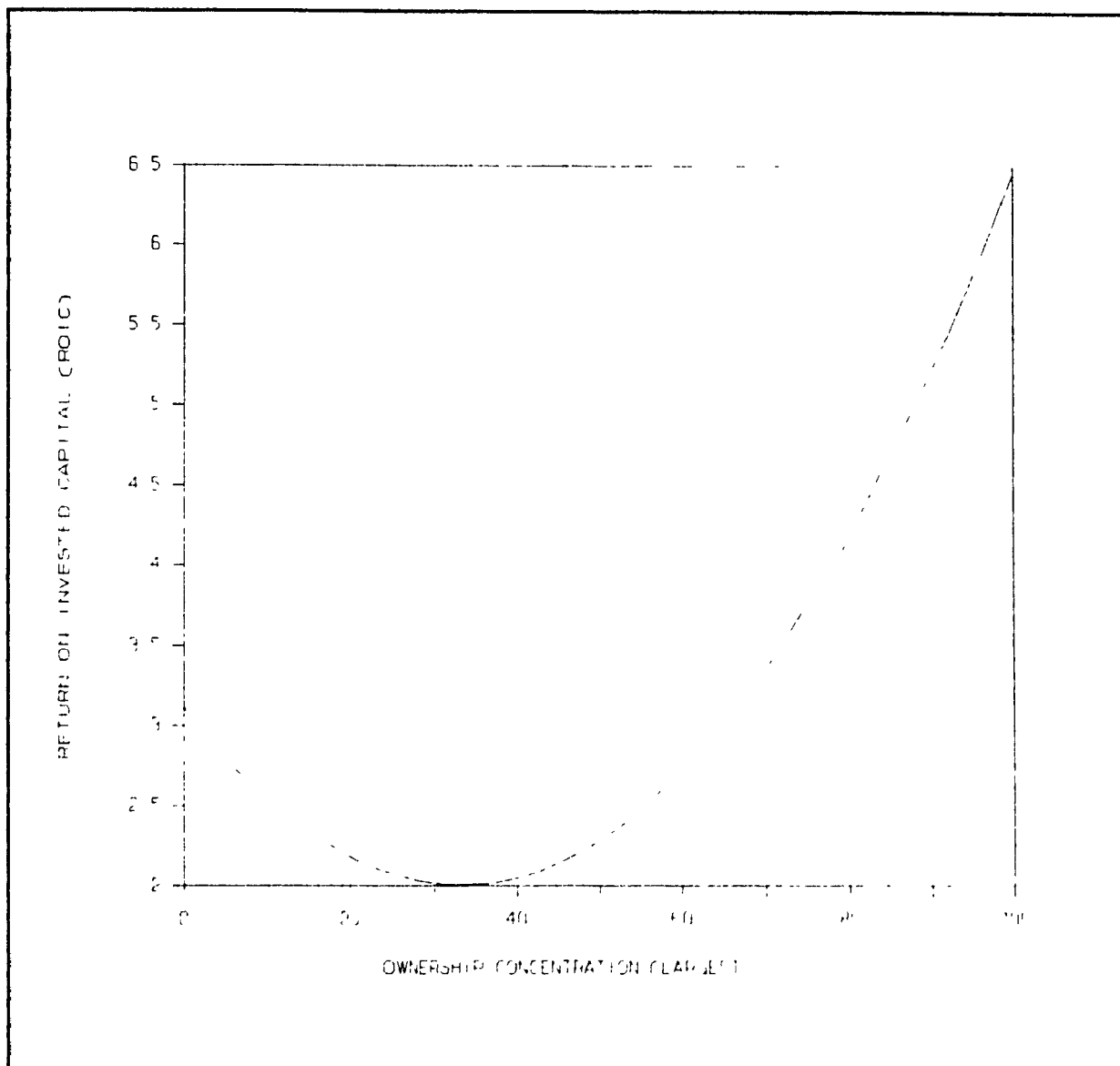


Figure 8: Regression Results: Ownership Concentration (LARGEST) On Return on Invested Capital (ROIC)

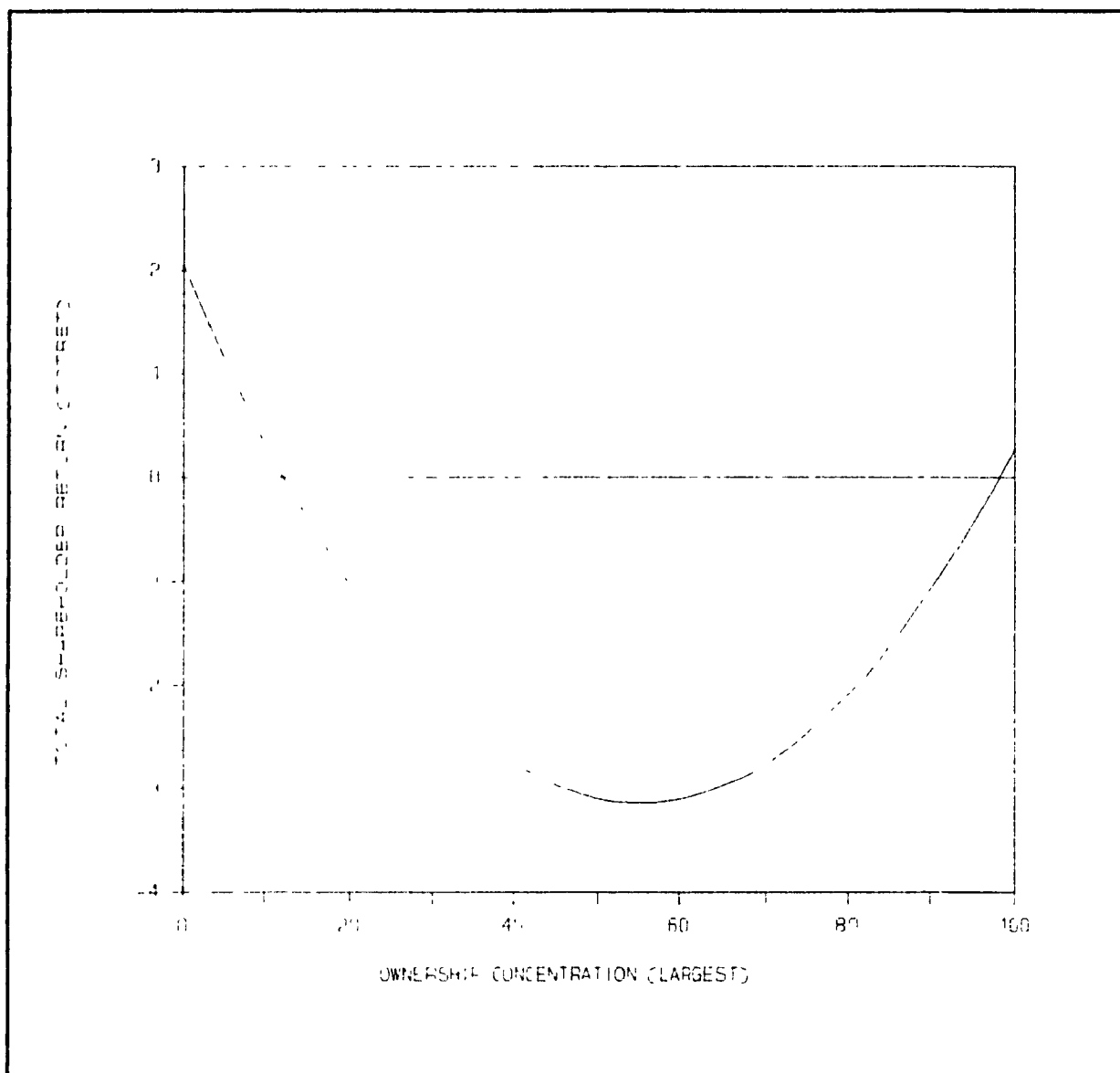


Figure 9: Regression Results: Ownership Concentration (LARGEST) On Total Shareholder Return (TOTRET)

ownership concentration and financial performance in the U.S. resembles a shallow U. The relationships implied by these regression results are depicted in Figures 7-9.

While the results pertaining to the alternative measures of financial performance differ in terms of their points of intercept and inflexion, they do suggest a common basic relationship between ownership concentration and financial performance among U.S. firms.

Specifically, there is a distinct U-shaped relationship between ownership concentration and firm performance. That is, ownership concentration first exhibits a negative relationship of diminishing magnitude with financial performance and then increases at an increasing rate.

For instance, in the particular case of the ownership concentration-return on assets (ROA) results, ROA is equal to 9.73% at ownership concentration (LARGEST) = 0 (ie. the intercept) and then decreases to 7.69% at the function's point of inflexion (ie. LARGEST = 46%). The function then increases at an increasing rate with return on assets (ROA) = 10.7% at LARGEST = 100%. The return on invested capital (ROIC) and total shareholder return (TOTRET)-ownership concentration functions are of similar shape, but differ in terms of their points of inflexion.

The curvilinear relationship between ownership concentration and firm performance in the U.S. is unexpected,

but is nevertheless theoretically interesting². This finding suggests that mid-range levels of stock concentration are associated with the lowest levels of financial performance. As demonstrated by the results presented here, this finding appears to be fairly robust across both accounting and market based measures of performance.

These findings and their implications regarding corporate strategy, performance and public policy are discussed at greater length in the two concluding chapters.

6.7 Summary and Discussion

In this chapter, the main body of results in this thesis was presented. In Section 6.1, the relationship between ownership concentration and financial performance was evaluated at both the cross-national and country-specific levels. No support is found for the agency theory hypothesis of a positive relationship between ownership concentration and corporate financial performance. That is, in general, the results in Section 6.1 support the property rights contention that there is no relationship between ownership concentration and corporate financial performance.

² Mork et al (1988) find a similar, but not identical relationship between managerial shareholdings in *Fortune 500* firms and financial performance. While their study evaluates the incentive and retrenchment implications of managerial shareholdings, this study's focus is on the influence of concentrated ownership on firm performance. As such, the similar results of the two studies are interesting, but are probably not suggestive of the same causal dynamics.

In Section 6.2, the issue of whether national context moderates the relationship between ownership concentration and corporate financial performance was evaluated. In general, there is only weak support for the 'national context moderates the relationship between ownership concentration and financial performance' hypothesis. These results undoubtedly reflect the absence of a direct relationship between ownership concentration and corporate financial performance reported in Section 6.1.

In Section 6.3, the relationships between ownership concentration and various dimensions of corporate strategy were evaluated. In general, this study finds strong support for the hypothesized cross-national and country-specific ownership concentration-strategy relationships hypothesized in Chapter 4. That is, it is found that ownership concentration influences a wide range of corporate strategic choices.

In Section 6.4, the question of whether national context moderates the relationship between ownership concentration and corporate strategy was evaluated. In general, strong support is found for the hypothesis that national context moderates the relationship between ownership concentration and corporate strategy. That is, the relationship between ownership concentration and a number of strategic dimensions is found to vary across national contexts in terms of magnitude, direction, and significance.

In Section 6.5, the entire ownership concentration-

strategy-performance relationship was evaluated. Although, it was not possible to demonstrate that strategy mediates the relationship between ownership concentration and financial performance due to the absence of a 'main-effect' between ownership concentration and corporate financial performance, numerous instances were found of 'indirect' relationships between these two constructs. That is, it was found that ownership concentration influences many strategic choices which in turn influence corporate performance.

Taken together, the results presented here point to serious limitations in generalizing agency relationships across national contexts. In particular, it is found that both the ownership concentration-corporate strategy and ownership concentration-strategy-performance relationships vary significantly across national contexts.

Finally, the ancillary results presented in Section 6.6 indicate that the relationship between ownership concentration and firm performance is non-linear. In particular, it is found that U.S. firms are unique in the context of this study in terms of their U-shaped relationship between ownership concentration and firm performance.

The implications these findings have for both academics and practitioners will be highlighted in the two concluding chapters.

CHAPTER 7

Discussion

In this chapter, the findings presented in Chapter 6 are discussed. In addition, some theoretical and practical implications of the findings are highlighted and suggestions for further research are offered.

In Section 7.1, this study's findings pertaining to the relationship between ownership concentration and firm performance are discussed. In general, the results do not support the agency theory, separation of ownership and control hypothesis that there is a positive relationship between ownership concentration and firm performance.

On the contrary, fairly strong support for the competing property rights hypothesis is found. That is, there is no consistent relationship between ownership concentration and firm performance.

At the end of Section 7.1, the unique curvilinear U-shaped relationship between ownership concentration and firm performance among U.S. firms reported in Section 6.6 is discussed.

In Section 7.2, results pertaining to the relationship

between ownership concentration and corporate strategy are discussed. In general, it is found that ownership concentration influences a wide range of strategic outcomes. More specifically, the pattern of results typically support the cross-national and country-specific hypotheses which were developed in Chapter 4.

In Section 7.3, the strong evidence found in this study in support of the general proposition that national context moderates the relationship between ownership concentration and corporate strategy is discussed.

In Section 7.4, the role that strategy plays in the relationship between ownership concentration and firm performance is discussed.

Although the results presented in this study do not meet the strict criterion for mediation established by Barron and Kenny (1986), there does appear to be an indirect relationship between ownership concentration and firm performance. That is, it is found in a number of important instances that ownership concentration influences corporate strategic dimensions which in turn influence corporate performance.

Other findings discussed in Section 7.4 indicate that the entire ownership concentration-strategy-performance relationship is moderated by national context.

In concluding this chapter (Section 7.5), a brief discussion and interpretation of general patterns in corporate governance relationships is offered on a country, by country

basis.

7.1 The Ownership Concentration-Performance Relationship

Table 74 summarizes the ownership concentration-performance findings presented in Section 6.1. In general, no support is found for the agency theory hypothesis that there is a positive relationship between ownership concentration and firm performance.

That is, the ownership concentration (LARGEST) coefficient is not significant and positive in any of the models estimated. In fact, the only significant LARGEST coefficients are negative.

Notwithstanding, these negative and significant coefficients¹, the results summarized in Table 74 offer strong support for the property rights hypothesis that there is no relationship between ownership concentration and firm performance.

¹ The importance of the few negative and significant relationships found is mitigated by two factors. First, all models in which ownership concentration is regressed on financial performance have very low R²'s (circa .15). The low R²'s suggest that even though significant, ownership concentration explains only a very small percentage of the variance in financial performance. Second, there is no apparent convergent validity in the results. That is, LARGEST is not significant on more than one of three indicators of financial performance in either the cross-national or any of the country-specific analyses.

Table 74

**Summary of Results:
Ownership Concentration (LARGEST) on Performance**

	CROSS NATIONAL	CANADA	FRANCE	GERMANY	U.K.	U.S.
ROA	NS	NS	NS	(-)**	NS	NS
ROIC	NS	NS	(-)**	NS	(-)*	NS
TOTRET	(-)**	NS	NS	NS	NS	(-)**

- * significantly different at $p < .1$
- ** significantly different at $p < .05$
- *** significantly different at $p < .01$

As such, these results imply that the constraints imposed upon management by concentrated owners are not binding. Rather, other economic and political forces such as product and factor market competition (Porter, 1980; Schmalensee, 1985; Wernerfelt & Montgomery, 1988), efficient capital markets (Jensen & Ruback, 1983; Manne, 1964) and the bargaining power of stakeholders (Cyert & March, 1963; Pfeffer & Salancik, 1978; Thompson, 1967) other than shareholders may be more binding constraints on managers than ownership concentration.

Ancillary results presented in Section 6.6 indicate that U.S. firms exhibit a unique relationship between ownership concentration and firm performance. In particular, it is found that among these firms there is a distinct U-shaped curvilinear relationship between ownership concentration and firm performance.

One possible explanation for these findings is that firm performance is negatively impacted upon by ambiguous control positions of major shareholders and management. That is, performance suffers when neither ownership, nor management interests are firmly in control of the firm.

The curvilinear relationship between ownership concentration and firm performance reported here suggests that jockeying for position and control between owners and managers may actually give rise to agency costs which have a deleterious impact upon corporate performance. That is, in

instances where neither a major shareholder, nor management has unambiguous control over a firm, the energy, resources and managerial focus of the firm may deviate from operational matters to resolving conflicts of interests between stakeholders (Gedajlovic, 1990).

The time period examined in the study (ie. 1985-90) was especially noteworthy in the U.S. owing to the unprecedented activity of the market for corporate control (Jensen, 1989) and the emergence and dissemination of financial innovations designed to advance the interests of either managers or shareholders (eg. leveraged buy-outs, 'poison-pills', 'golden-parachutes' and 'green-mail').

In the volatile corporate governance landscape of the U.S. in the last half of the 1980's, firms with ambiguous control distributions between shareholders and managers may have been especially prone to unproductive conflicts over control and the allocation of resources.

Of course the question of whether this scenario, which is marked by a curvilnear U-shaped relationship between ownership concentration and performance, is a distinctively U.S. phenomenon of the late 1980's is an empirical question.

In order to evaluate whether the ownership concentration-firm performance relationship is U-shaped in other national contexts examined in this study, four additional series of OLS models were estimated in which LARGEST and LARGEST² were regressed on each of the ROA, ROIC and TOTRET measures of

financial performance. In no instance was evidence found supporting the existence of the U.S. U-shaped pattern among non-U.S. firms.

These findings indicate that the U.S. context is unique in terms of its relationship between ownership concentration and firm performance. That is, firms in the U.S. context exhibit a curvilinear U-shaped relationship between ownership concentration and firm performance which is unique within the context of this study. This finding offers support for the proposition that the relationship between ownership concentration and firm performance is moderated by national context.

Further research is required to ascertain whether this curvilinear relationship is stable and consistent over time, or whether the U-shaped relationship was driven by the exceptional corporate governance landscape of the U.S. in the latter half of the 1980's.

In summary, this study offers no support for the separation of ownership and control proposition (Hypothesis 1A) that there is a positive relationship between ownership concentration and firm performance. On the contrary, the results presented here offer convincing support for the property rights hypothesis that there is no relationship between ownership concentration and firm performance (Hypothesis 1B).

That is, no consistent relationship is found between

ownership concentration and firm performance in any of the Canadian, French, German, and U.K. national contexts. In the U.S. context, the relationship between ownership concentration and firm performance is U-shaped. This relationship is not consistent with either agency, or property rights theory, but can be explained in terms of the unique institutional context of the U.S. during the second half of the 1980's.

7.2 The Ownership Concentration-Strategy Relationship

In general, results presented in Chapter 6 offer strong support for the basic proposition that ownership concentration influences corporate strategy. These results are summarized in Table 75. Also, the pattern of findings offers fairly strong support for the country-specific hypotheses developed in Chapter 3 (Table 76).

In the following sub-sections, the relationships between ownership concentration and the strategic outcomes examined in this study are discussed in terms of the hypotheses developed earlier.

Corporate Growth (SALESG)

No consistent support is found in this study for the agency theory proposition that ownership concentration is negatively related to corporate growth (Hypothesis 2A).

On the contrary, fairly strong support is found for the competing hypothesis that ownership concentration is not

Table 75

**Summary of Results:
Ownership Concentration (LARGEST) on Strategy***

	CROSS NATIONAL	CANADA	FRANCE	GERMANY	U.K.	U.S.
(SALESG)	NS	NS	NS	NS	(-)**	NS
(FSALES)	(-)**	(-)*	(+)**	(-)**	NS	(-)**
(NBIZ)	(-)**	(+)**	(-)**	(-)**	NS	(-)**
(WD)	(-)*	(+)**	(-)**	(-)**	(+)*	(-)**
(RD)	(-)**	(-)**	(+)**	NS	(+)**	(-)**
(CAPFIX)	(+)**	(+)**	NS	(-)**	NS	(+)*
(PAYOUT)	(-)**	NS	(-)**	(+)**	(-)*	(-)**
(DEBTR)	(+)**	(-)*	NS	(+)**	(-)**	(+)**

- * significantly different at $p < .1$
- ** significantly different at $p < .05$
- ** significantly different at $p < .01$

* Variable definitions are provided in Table 21

Table 76

Hypothesized Versus Actual Relationships

Dependent Variable	Canada		France		Germany		U.K.		U.S.	
	Hyp	Act	Hyp	Act	Hyp	Act	Hyp	Act	Hyp	Act
Corporate Growth	0	0	0	0	0	0	0	-	0	0
Diversification	+	+	-	-	-	-	-	+	-	-
Geographic Scope	+	-	+	+	-	-	-	0	-	-
R&D Expenditures	-	-	+	+	+	0	+	+	-	-
Capital Expenditures	+	+	-	0	-	-	+	0	+	+
Payout Ratios	+	0	-	-	+	+	-	-	-	-
Financial Leverage	-	-	-	0	+	+	-	-	+	+

related to corporate growth (Hypothesis 2B).

Only in the U.K. context, is LARGEST a significant predictor of year to year sales growth (SALESG). Evaluated on all other samples (ie. the cross national, and the Canadian, French, German, and U.S. set), ownership concentration is not related to SALESG.

Given the significant relationship between ownership concentration and all other strategic outcomes examined in this study, these findings suggest that as a strategy measure, SALESG contains a lot of 'noise'.

While agency theory provides the general insight that managers tend to maximize growth rather than profits (Jensen, 1989; Marris, 1964), insights from organizational theory (eg. Penrose, 1959) suggest that growth may also be an indicator of performance in its own right. Sales growth may also be a sort of contextual variable since growth potential is highly dependent upon general industry and country conditions.

As such, SALESG may be a very coarse indicator of managerial growth maximizing behaviour.

In the two proceeding sub-sections, results pertaining to two more narrowly focused indicators of growth (diversification and geographic Scope) are discussed which better reflect the strategic choices made by managers. That is, in contrast to a simple measure of growth which reflects strategic choice, but also performance outcomes and contextual conditions, diversification and geographic breadth are less

noisy indicators of strategic choice.

Diversification (NBIZ & WD)

Results reported in Chapter 6 offer mixed support for the agency theory proposition that ownership concentration is negatively related to corporate diversification (Hypothesis 3A).

As expected, the relationship between ownership concentration and diversification is negative in the U.S. context. Although the relationship between ownership concentration and diversification is also negative in France and Germany, the dynamics underlying this relationship are probably driven by an additional set of factors.

That is, the powerful trade unions found in France and Germany can be expected to resist diversification attempts since the skill profiles of many workers are such that inter-industry mobility (particularly to industries sufficiently different to be counter-cyclical) may be limited. Also, labour may equate diversification moves by management with a lack of commitment to the core industry. As such, the interests of labour may interact with the those of shareholders and forestall diversification.

In contrast to agency theory expectations, ownership concentration is actually positively related to diversification in the Canadian and U.K. contexts. As discussed in Chapter 3, the positive relationship between

ownership concentration and diversification is expected in the Canadian context because many corporations in Canada are controlled by groups of family members who are guided by wealth conservation, rather than wealth maximization norms (Fisher, 1989). As such, given the high concentration of corporate ownership held Canadian by families, corporate-level diversification may be very much in the interest of majority shareholders.

The positive relationship between ownership concentration and diversification in the U.K. is unexpected, but offers additional support for the general proposition that the institutional characteristics of a national context moderate the relationship between ownership concentration and corporate strategy.

Geographic Scope

Findings presented in Chapter 6 offer mixed support for the agency theory hypothesis that there is a negative relationship between ownership concentration and geographic scope (Hypothesis 4A).

That is, a negative relationship between ownership concentration and geographic scope is expected because diversification moves by management may be manifested in geographic as well as product market space.

Contrary to expectations, there is no relationship between ownership concentration and geographic scope in the

U.K. However, in support of the agency theory perspective, there is a negative relationship between ownership concentration and geographic scope among U.S. firms.

The relationship between ownership concentration and geographic scope is also negative in Germany where the powerful vested interests of labour may be expected to act against the internationalization of operations because of its negative implications regarding domestic employment levels. As was the case with diversification, the interests of German shareholders and labour may be coincident and may act interactively in forestalling international expansion.

As discussed in Chapter 3, a positive relationship between ownership concentration and geographic scope was expected in Canada and France because of the relatively small size of those domestic markets. Under such conditions, internationalization may be a requisite rather than a strategic choice. As predicted, the relationship between ownership concentration and geographic scope is positive in the French context.

However, contrary to expectations, the relationship between ownership concentration and geographic scope is negative in Canada. As noted earlier, Canadian shareholders may be risk averse and consequently be expected to favour domestic operations which are more easy to monitor and which have more certain payoffs. As such, the risk aversion of concentrated Canadian shareholders appears to result in lower

levels of internationalization despite Canada's relatively small domestic market.

R&D Expenditures

As discussed in Chapter 3, there are two rival agency theory hypotheses concerning the relationship between ownership concentration and R&D expenditures.

On the one hand, Hill and Snell (1988, 1989) contend that the relationship between ownership concentration and R&D expenditures is positive because managers prefer to invest in other, less risky endeavours (Hypothesis 5A).

On the other hand, Grabowski and Mueller (1972) suggest that the relationship between ownership concentration and R&D expenditures is negative because such expenditures are likely to be the investment activity which has the greatest long-run effect on corporate growth which is typically favoured by unconstrained management (Hypothesis 5B).

U.S. results presented in Chapter 6 support Grabowski and Mueller's contention that ownership concentration and R&D expenditures are negatively related. That is, ownership concentration appears to have a depressive effect on R&D expenditures among U.S. firms.

This result is consistent with the finding that ownership concentration is positively related to financial leverage (Table 75). As such, in order to meet fixed debt schedules, variable expenses such as R&D expenditures may be curtailed.

As expected, the relationship between ownership concentration and R&D expenditures is also negative among Canadian firms. The risk averse nature of major Canadian shareholders suggests that they would not favour high levels of R&D expenditures.

In contrast to the North American experience, the relationship between ownership concentration and R&D expenditures is positive among French and U.K. firms. Ownership concentration and R&D expenditures are not related among German firms.

These results are generally supportive of the hypothesized relationships (Hypothesis 5C) for European firms. That is, in Europe stakeholders such as trade unions likely favour high levels of R&D expenditures because it signals a continued corporate commitment to a company's core business activities.

Capital Expenditures

As was the case with R&D expenditures, Hill and Snell (1989) and Grabowski and Mueller (1972) offer competing claims regarding the relationship between ownership concentration and capital expenditures.

On the one hand, Grabowski and Mueller suggest that the relationship between ownership concentration and capital expenditures is negative because such resource allocations are means by which managers may pursue corporate growth

(Hypothesis 6A).

On the other hand, Hill and Snell contend that the relationship between ownership concentration and capital expenditures is positive because unmonitored managers prefer to invest in higher staff levels rather than in capital expenditures (Hypothesis 6B).

The Canadian and U.S. results presented in Chapter 6 support Hill and Snell's claim that there is a positive relationship between ownership concentration and capital expenditures. However, contrary to expectations, there is no significant relationship between ownership concentration and capital expenditures among U.K. firms. These findings suggest that concentrated owners in Canada and the U.S. favour large outlays in capital expenditures, but their counterparts in the U.K. do not.

As noted earlier, this last finding may reflect asset substitution dynamics whereby concentrated owners attempt to transfer risk from themselves to debtholders by financing large capital expenditures through debt sources (Harris & Raviv, 1991). The negative relationship between capital expenditures and financial leverage (from Table 37; $R^2 = -.09$, $p < .01$) offers some support for this explanation of the positive relationship between ownership concentration and capital expenditures among U.S. firms.

As expected, the relationship between ownership concentration and capital expenditures is negative in Germany.

The non-significant correlation between capital expenditures and financial leverage in Germany (Table 37) suggests that asset substitution dynamics are not operative that national context. Indeed, the important role that German banks play as both shareholder and creditor obviously mitigates against problems of asset substitution.

Payout Ratios

As noted in Chapter 3, there are two competing agency theory positions regarding the relationship between ownership concentration and dividend payout ratios.

On the one hand, dividend payments are a means of reducing the free cash flow on hand which managers may use to pursue their own agendas at the expense of shareholders (Jensen, 1989). As such, concentrated owners may push for higher dividend payout ratios. Consequently, this line of argumentation suggests that there is a positive relationship between ownership concentration and dividend payout ratios (Hypothesis 7A).

On the other hand, others (eg. Harris & Raviv, 1991) contend that concentrated owners are in a much better position to monitor their investments and therefore are less likely to be concerned with the misuse of free cash flow. According to this line of argumentation, there is a negative relationship between ownership concentration and firm performance (Hypothesis 7B).

The French, U.K. and U.S. results presented in Chapter 6 support Harris and Raviv's contention that there is a negative relationship between ownership concentration and dividend payout ratios. Concentrated owners in the U.K. and the U.S. (ie. countries where corporate disclosure requirements are quite comprehensive) appear to be content with lower dividend payout levels. In France, the highly concentrated ownership of firms undoubtedly leaves shareholders in a good position to monitor their investments.

Contrary to expectations, there is no relationship between ownership concentration and dividend payout ratios among Canadian firms. A positive relationship was expected because Canadian owners are more risk averse than their counterparts in other countries. Apparently, concentrated Canadian owners do not induce higher dividend payout ratios.

As expected, concentrated ownership is positively related to stock concentration among German firms. The fact that German banks act as both shareholder and creditor allow firms to lower their cost of capital by paying dividends out to shareholders and then borrowing the necessary funds back through debt instruments which are given favourable tax treatment.

Financial Leverage

As noted in Chapter 3, two competing agency theory explanations exist regarding the relationship between

ownership concentration and financial leverage. Both explanations predict a positive relationship between ownership concentration and financial performance (Hypothesis 8A).

The first explanation suggests that concentrated owners prefer higher levels of leverage because it implies that managers have less free cash flow at their disposal with which they may pursue their own agendas at the expense of shareholders (Jensen, 1988).

The second explanation is based upon the idea that tensions exist in the relationship between shareholders and creditors. Indeed, an 'asset substitution' argument summarized by Harris and Raviv (1991) suggests that shareholders favour high levels of leverage as a means of transferring risk from themselves to debtholders.

Accordingly, conflicts between shareholders and debtholders arise because the debt contract gives shareholders an incentive to invest sub-optimally (Jensen & Meckling, 1976). This occurs because interest rates paid to debtholders are fixed, but effective returns to shareholders are variable and may be above, or below the return to debtholders. Consequently, diversified shareholders who benefit from limited liability, stand to benefit from high risk strategies even if they are value decreasing. These sorts of investments effectively decrease the value of debt by increasing the risk borne by debtholders whose rate of return has been predetermined.

As expected, the U.S. results presented in Chapter 6 offer strong support for the hypothesized positive relationship between ownership concentration and financial leverage. In the U.S. context, tensions between shareholders and creditors are quite severe (Harris & Raviv, 1991) and an active market for corporate control has left many corporations with high levels of financial leverage and ownership concentration.

The relationship between ownership concentration and financial leverage is also positive in the German context. In contrast to the U.S. case, this finding likely reflects the coincidence of creditor-shareholder interests, rather than asset substitution dynamics. That is, cooperation between shareholders and creditors allows German firms to assume high levels of debt financing which may effectively lower their cost of capital. This occurs because German banks are both shareholder and creditor. Under these circumstances, the added risk of bankruptcy associated with high levels of debt financing is mitigated somewhat by the alignment of shareholder and creditor interests.

In Canada, France and the U.K., a negative relationship was expected between ownership concentration and financial leverage. In those national contexts, the use of multiple classes of shares with unequal voting rights is wide spread. The use of these securities allows concentrated owners to raise capital without diluting their controlling interest in

the firm (Hart, 1988). In such contexts, concentrated owners are expected to favour lower levels of financial leverage.

While there is no relationship between ownership concentration and financial leverage among French firms, the relationship between ownership concentration and financial leverage is negative and significant among Canadian and U.K. firms.

7.3 The Moderating Effect of National Context on the Ownership Concentration-Strategy Relationship

The results presented in Chapter 6 offer compelling evidence regarding the moderating influence of national context on the relationship between ownership concentration and a variety of strategic outcomes. The MANCOVA results presented earlier in Tables 53-60 which demonstrate the extent to which country-pairs differ in terms of a particular ownership concentration-strategy relationship are summarized in Table 77.

MANCOVA is a commonly used analytical procedure employed to test the significance of differences between sub-samples in terms of a relationship between a dependent and predictor variable while controlling for other effects (Neter, Wasserman and Kutner, 1990).

In the context of this study, MANCOVA is used to test for differences across countries in terms of a particular ownership concentration-strategy relationship while controlling for firm size, industry context, year, and foreign

Table 77

Summary of Ownership Concentration (LARGEST) -Strategy* MANCOVA Results

Variable	Country Pairs Different at p < .001	Country Pairs Different at p < .01	Country Pairs Different at p < .05	Country Pairs Different at p < .1
SALESG	1	1	1	1
FSALES	5	7	7	7
NBIZ	2	3	4	6
WD	0	3	4	6
RD	1	2	4	5
CAPFIX	0	0	3	4
PAYOUT	2	5	7	8
DEBTR	5	5	5	7

* Variable definitions are provided in Table 21

control.

The results summarized in Table 77 offer very strong support for the general hypothesis that national context moderates the relationship between ownership concentration and various strategic outcomes. In fact, the MANCOVA results indicate that significant differences exist across national contexts in terms of the relationship between ownership concentration and each of the strategy indices considered in this study.

That is, at least one country-pair exhibits a statistically unique relationship at $p < .05$ in terms of each ownership concentration-strategy relationships evaluated. Moreover, the MANCOVA results support the moderation hypothesis at the very rigorous $p < .001$ level in terms of six of the eight strategic dimensions examined in this study.

While in a purely technical sense, a single statistically different country-pair in terms of an ownership concentration-strategy relationship is sufficient to support a hypothesis of moderation, such a coarse test obscures the extent to which national context moderates a particular relationship.

In order to evaluate the robustness of the moderating influence of national context, a series of ten MANCOVA's for each ownership concentration-strategy relationship were estimated to test whether a difference exists between a particular pair of countries.

The results summarized in Table 77 indicate that the

moderating influence of national context on the ownership concentration-strategy relationship is both quite robust and important. With the exception of the ownership concentration-sales growth (SALESG) relationship, many more than one country-pair are statistically different. In fact, at least four country-pairs exhibit statistically significant differences in terms of all other ownership concentration-strategy relationships.

Owing to the fact that more than two country-pairings are statistically different in terms the relationship between ownership concentration and seven of eight strategic dimensions considered, these findings indicate that national context profoundly influences both the direction and magnitude of this important corporate governance relationship.

Several important practical and theoretical conclusions which may be drawn from this finding are discussed below in Chapter 8.

7.4 Ownership Concentration-Strategy-Performance Relationships

Earlier in Section 3.2(C), a gap in the corporate governance literature pertaining to the relationship between ownership concentration and firm performance was highlighted. In particular, it was pointed out that the corporate governance literature is dominated by two sorts of empirical studies.

That is, one group of studies has examined the

relationship between ownership concentration and financial performance. These studies may demonstrate that ownership concentration and financial performance are related, but they leave implicit the strategic processes which both agency theory and strategic management suggest mediate this relationship.

Another group of studies has examined the relationship between ownership concentration and various strategic outcomes. These studies may demonstrate that ownership concentration is related to corporate strategy, but do not indicate that the ownership concentration-strategy association materially impacts upon corporate performance.

In an attempt to address this limitation, this study tested the hypothesis that strategy mediates the relationship between ownership concentration and firm performance (Hypothesis 9).

The absence of a consistent ownership concentration-performance relationship reported earlier (Tables 38-43 and Table 75) indicates that in a technical sense, strategy does not mediate the relationship between ownership concentration and firm performance. That is, since one of the technical criteria necessary to establish that strategy mediates the relationship between ownership concentration and firm performance is a significant direct relationship between ownership and performance (Barron & Kenny, 1986), the results presented in this study do not directly support Hypothesis 9.

The absence of a direct relationship between ownership concentration and firm performance is quite troubling because ownership concentration does influence a broad array of strategic dimensions (Tables 47-52 and Table 75). That is, taken together, these findings appear to suggest that the strategic dimensions considered do not influence financial performance.

In order to evaluate whether the strategy measures used in this study influence corporate performance, a series of OLS models regressing each strategy variable on three measures of financial performance were estimated for the cross-national and country-level samples (Tables 61-66). The strategy on ROA regression results are summarized in Table 78.

Taken together, the results discussed in this section suggest that while strategy cannot be said to mediate the relationship between ownership concentration and firm performance, there does appear to be an indirect relationship between these two constructs. That is, while ownership concentration does not generally influence financial performance directly, it does influence a wide array of strategic decisions. Further, many of these strategic decisions influence corporate performance.

In order to probe the nature and extent of the indirect relationship between ownership concentration and firm performance, all possible ownership concentration-strategy-performance relationships were mapped out (Tables 67-72) by

Table 78

**Summary of Results:
Strategy* on Return on Assets (ROA)**

	CROSS NATIONAL	CANADA	FRANCE	GERMANY	U.K.	U.S.
(SALESG)	(+) ^{***}	(+) ^{***}	(+) ^{***}	NS	(+) ^{***}	(+) ^{***}
(FSALES)	NS	NS	(+) ^{***}	NS	NS	NS
(NBIZ)	(-) ^{***}	(+) ^{**}	NS	NS	(-) ^{***}	(-) ^{***}
(WD)	(-) ^{***}	NS	(-) ^{**}	(-) [*]	(-) ^{***}	(-) ^{***}
(RD)	NS	NS	NS	NS	(+) [*]	NS
(CAPFLX)	(+) ^{***}	(+) ^{**}	(+) ^{***}	NS	(+) ^{***}	(+) ^{***}
(PAYOUT)	(-) ^{***}	(-) ^{***}	(-) ^{***}	(-) ^{***}	(-) ^{***}	(-) ^{***}
(DEBTR)	(-) ^{***}	(-) ^{***}	(-) ^{***}	(-) ^{***}	(-) ^{***}	(-) ^{***}

* Variable definitions are provided in Table 21

- * significantly different at $p < .1$
- ** significantly different at $p < .05$
- *** significantly different at $p < .01$

estimating partial correlations between ownership concentration and each strategy measure as well as between each strategy measure and the three measures of financial performance considered in this study.

Following this procedure, numerous instances of clear ownership concentration-strategy-performance relationships were discovered at the cross-national and country-levels. These significant relationships are listed in Table 78.

As reflected in Table 79, there are six significant ownership concentration-strategy-performance relationships at the cross-national level, four in the Canadian and U.K. contexts, three in the French and German contexts, and five in the U.S. context.

These results provide a fairly good indication that an indirect relationship exists between ownership concentration and financial performance. That is, ownership concentration influences several strategic dimensions which in turn influence corporate performance.

While these results are not sufficient to establish that strategy mediates the ownership concentration-performance relationship, they do indicate the existence of many ownership concentration-strategy-performance relationships.

The results summarized in Table 79 also offer some support for the hypothesis that national context moderates the entire ownership concentration-strategy-performance relationship (Hypothesis 10). That is, although there are

Table 79

Significant Ownership-Strategy-Performance Relationships**Cross-National Sample**

LARGEST--FSALES--(ROIC)
 LARGEST--NBIZ--(ROA, ROIC)
 LARGEST--WD--(ROA, ROIC)
 LARGEST--CAPFIX--(ROA, ROIC)
 LARGEST--PAYOUT--(ROA, ROIC, TOTRET)
 LARGEST--DEBTR--(ROA, ROIC, TOTRET)

Canadian Sample

LARGEST--FSALES--(ROIC)
 LARGEST--NBIZ--(ROA, ROIC)
 LARGEST--CAPFIX--(ROA, ROIC)
 LARGEST--DEBTR--(ROA, ROIC, TOTRET)

French Sample

LARGEST--FSALES--(ROA, ROIC)
 LARGEST--WD--(ROA, ROIC)
 LARGEST--PAYOUT--(ROA, ROIC, TOTRET)

German Sample

LARGEST--WD--(ROA)
 LARGEST--PAYOUT--(ROA, ROIC, TOTRET)
 LARGEST--DEBTR--(ROA, ROIC)

U.K. Sample

LARGEST--SALES--(ROA, ROIC)
 LARGEST--WD--(ROA, ROIC)
 LARGEST--RD--(ROA, ROIC, TOTRET)
 LARGEST--DEBTR--(ROA, ROIC)

U.S. Sample

LARGEST--FSALES--(ROIC)
 LARGEST--NBIZ--(ROA, ROIC)
 LARGEST--WD--(ROA, ROIC, TOTRET)
 LARGEST--PAYOUT--(ROA, ROIC, TOTRET)
 LARGEST--DEBTR--(ROA, ROIC, TOTRET)

numerous significant ownership concentration-strategy-performance relationships at the cross-national and country-levels, no one ownership concentration-strategy-performance relationship is significant in each of the six sub-samples.

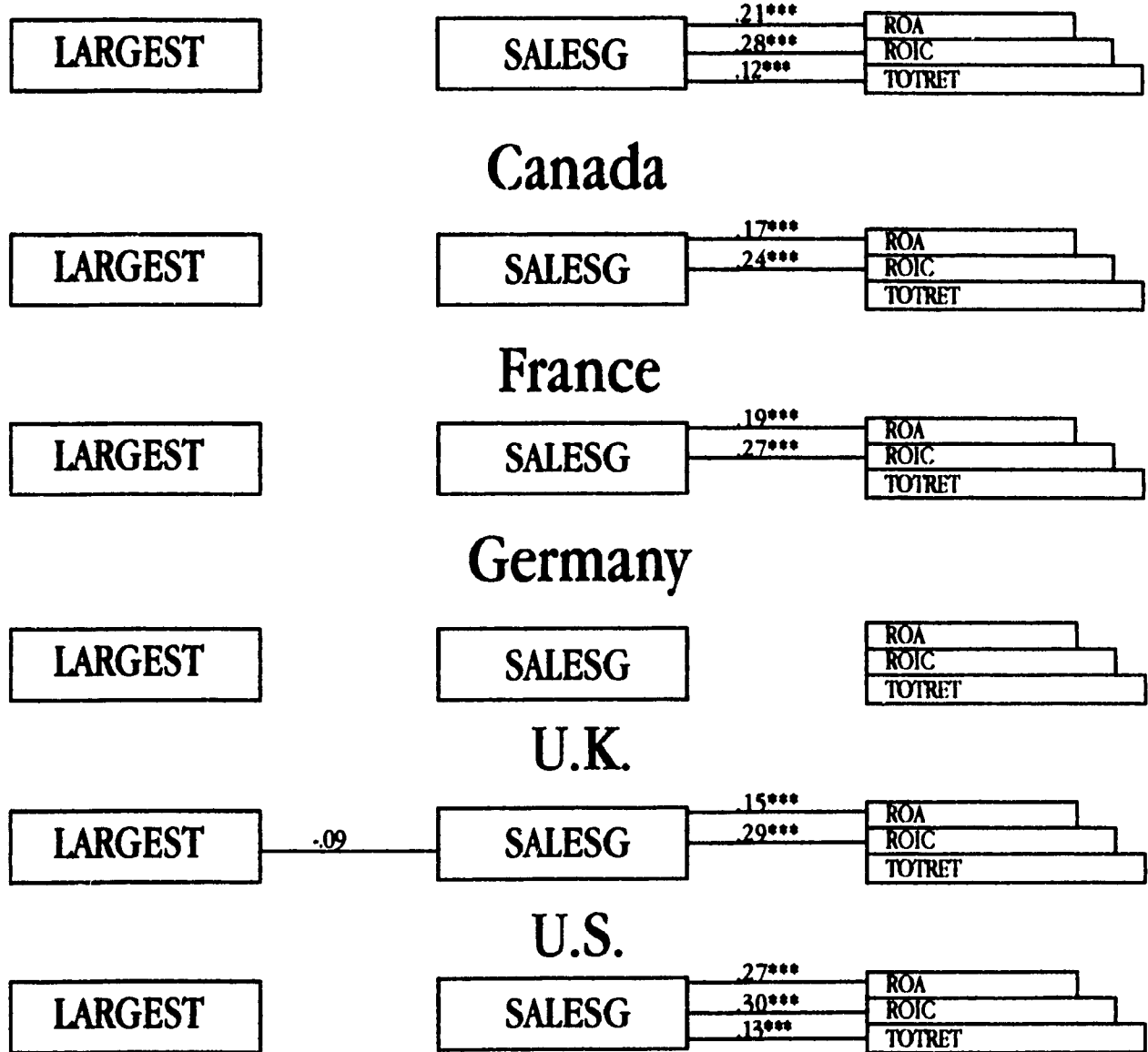
For instance, the ownership concentration (LARGEST)-sales growth (SALESG)-performance and the ownership concentration (LARGEST)-R&D intensity (RD)-performance relationships are unique features of the U.K. context.

In order to better evaluate Hypothesis 10, the ownership concentration-strategy-performance results presented in Tables 67-72 are reorganized by compiling all possible combinations and indexing them by strategy variable rather than by country (Tables 80-87).

The results presented in Tables 80-87 offer quite a strong indication that many ownership concentration-strategy-performance relationships are moderated by national context. That is, these results indicate that particular ownership concentration-strategy-performance relationships vary across national contexts in terms of their significance, magnitude and sign.

For instance, while the cross-national, Canadian and U.S. results indicate that ownership concentration (LARGEST) leads to narrower geographic scope (FSALES) which in turn leads to lower levels of performance (ROIC) (Table 81), this relationship is actually reversed in the French context. Among French firms, ownership concentration (LARGEST) has a positive

Cross-National



. p < .10
 * p < .05
 *** p < .01

Table 81
 Partial Correlations (FSALES)

Cross-National



Canada



France



Germany



U.K.



U.S.



$^* p < .10$
 $^{**} p < .05$
 $^{***} p < .01$

Table 82
Partial Correlations (NBIZ)

Cross-National



Canada



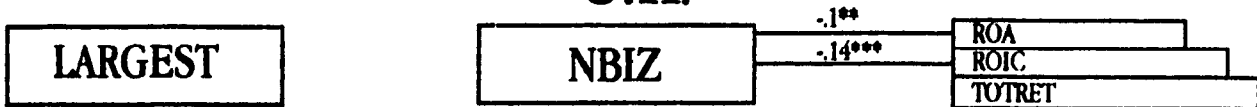
France



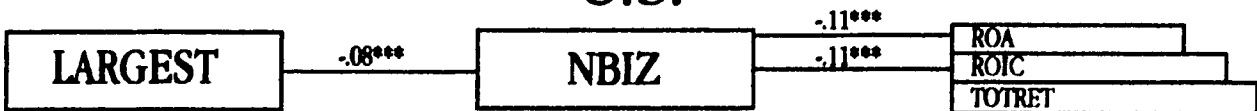
Germany



U.K.



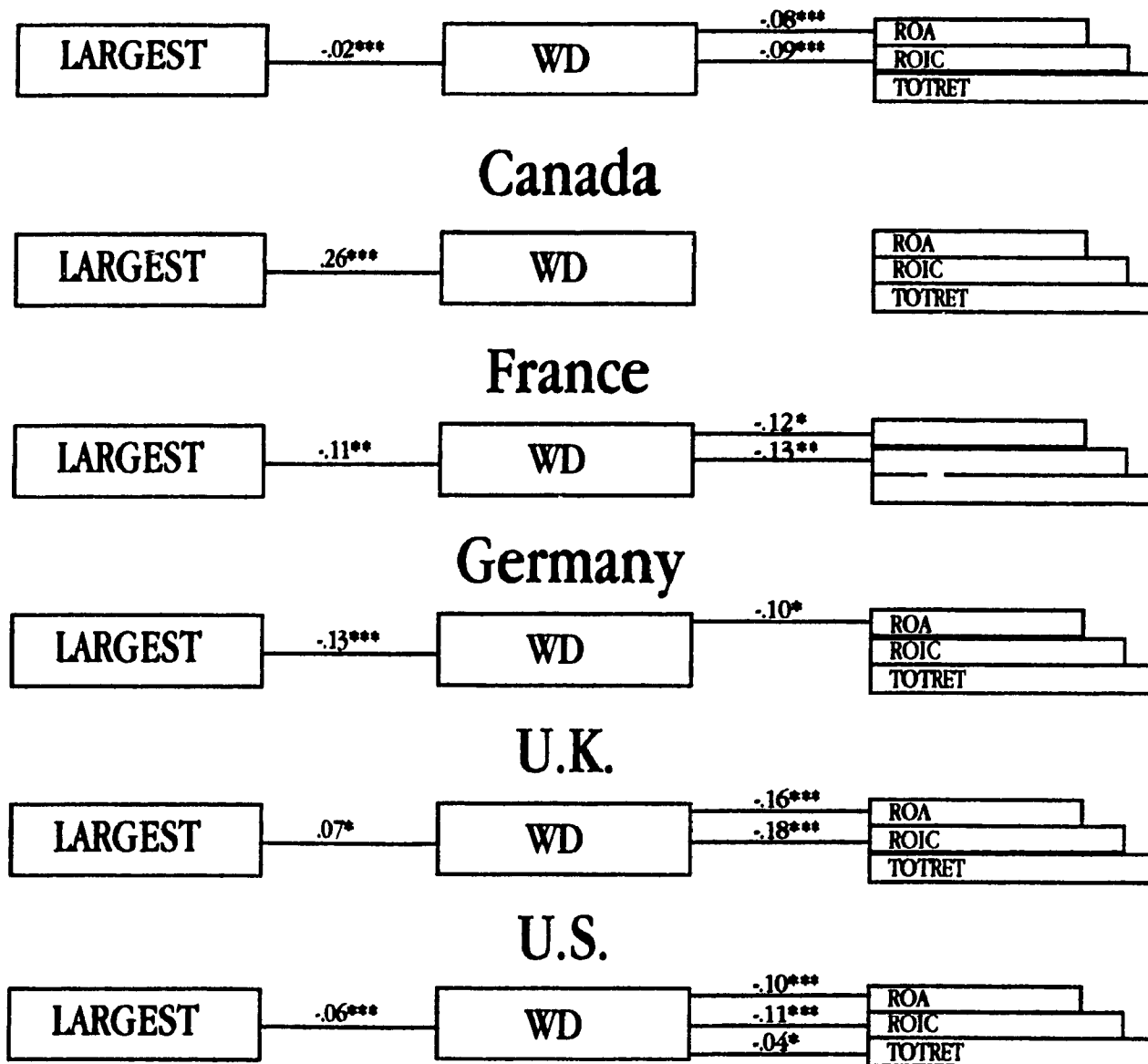
U.S.



* $p < .10$
 ** $p < .05$
 *** $p < .01$

Table 83
Partial Correlations (WD)

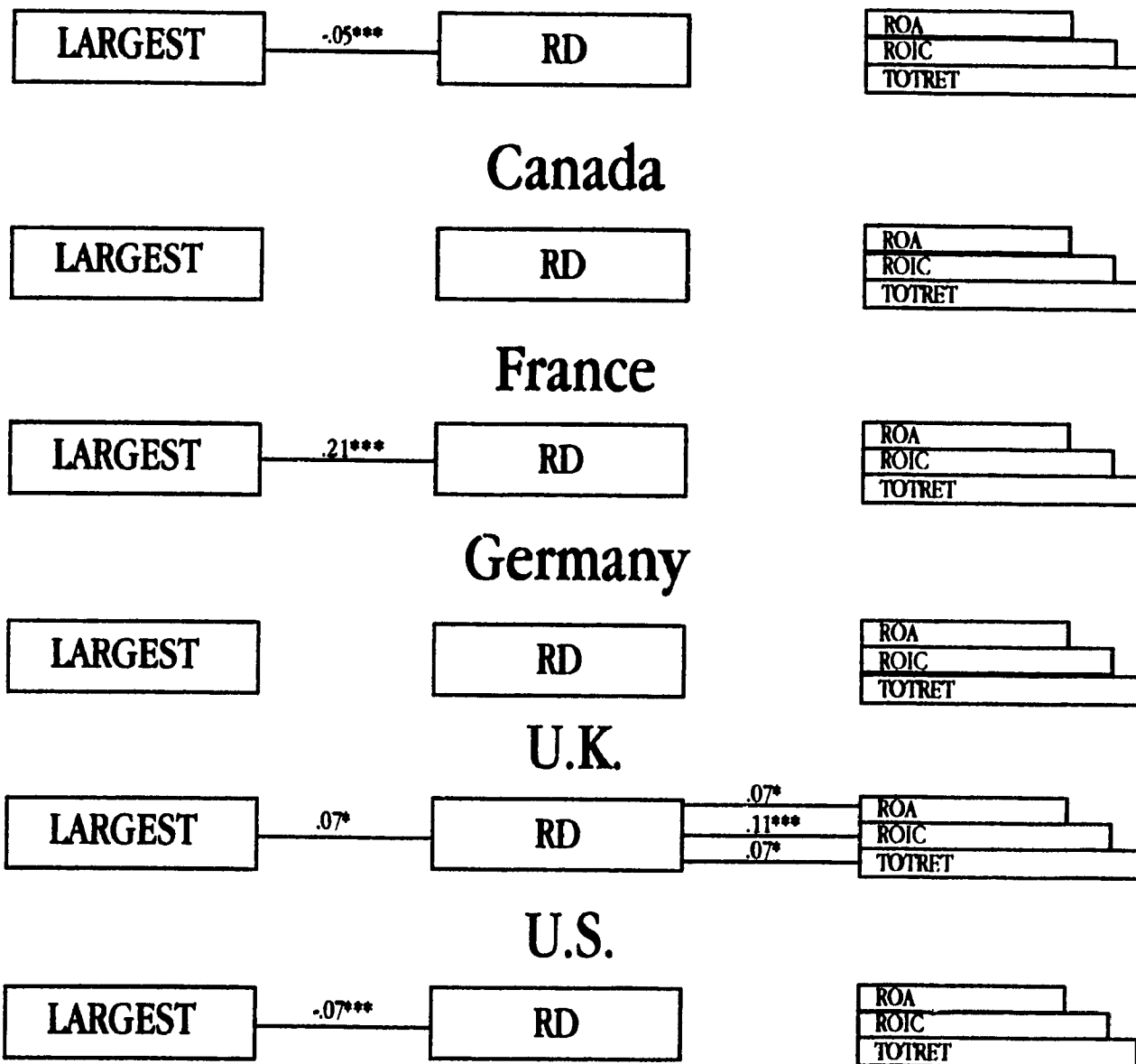
Cross-National



*p < .10
**p < .05
***p < .01

Table 84
Partial Correlations (RD)

Cross-National



*p < .10
 **p < .05
 ***p < .01

Table 85
 Partial Correlations (CAPFIX)

Cross-National



Canada



France



Germany



U.K.



U.S.



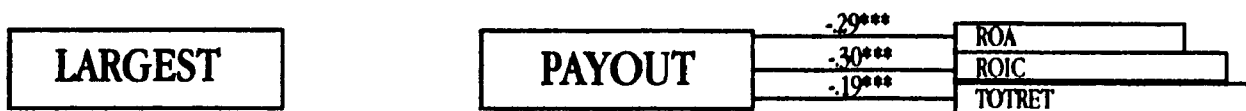
. p < .10
 * p < .05
 *** p < .01

Table 86
 Partial Correlations (PAYOUT)

Cross-National



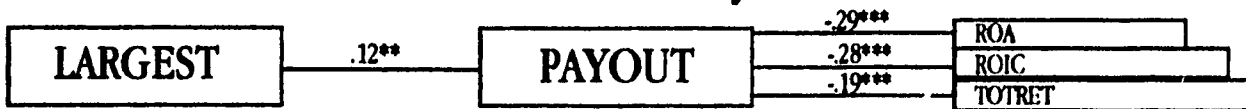
Canada



France



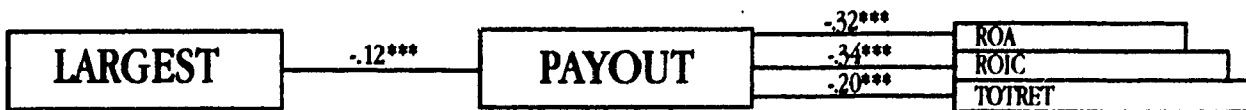
Germany



U.K.



U.S.



· p < .10
 ·· p < .05
 ··· p < .01

Table 87
 Partial Correlations (DEBTR)

Cross-National



Canada



France



Germany



U.K.



U.S.



*p < .10
 **p < .05
 ***p < .01

impact upon geographic scope (FSALES) which is positively related to performance (ROA, ROIC).

Similarly, at the cross-national level, as well as in the U.S. context, ownership concentration (LARGEST) is negatively related to product market scope (NBIZ) which is negatively related to performance (ROA, ROIC) (Table 82). In contrast, the relationship is reversed among Canadian firms. That is, in the Canadian context, ownership concentration (LARGEST) is positively related to product market scope (NBIZ) which in turn is positively related to performance (ROA, ROIC).

These results generally support Hypothesis 10 in that national context moderates many ownership concentration-strategy-performance relationships.

7.5 Differences Across Countries

Taken together, the results presented in this study indicate that national context strongly moderates important corporate governance relationships.

Indeed, the results presented in Tables 80-86 demonstrate quite dramatically the dangers of assessing corporate governance relationships without considering the national context within which they are embedded (Hamilton & Biggart, 1988). That is, the results presented in these tables indicate that cross-national generalizations are misleading and potentially dangerous. Indeed, different dynamics appear to be driving ownership concentration-strategy-performance

relationships across national contexts.

In general, agency theory explanations are most robust in the U.S. context. In particular, the ownership concentration-strategy results indicate that the interests of managers and shareholders do diverge over a broad range of strategic dimensions. These findings are not surprising since managerial capitalism and the separation of ownership and control have been a hallmark of the U.S. corporate governance landscape throughout the twentieth century.

Still, certain U.S. findings do not neatly conform to agency theory explanations. For instance, the curvilinear relationship between ownership concentration and corporate performance was unexpected. Indeed, contrary to agency theory predictions, the relationship between ownership concentration and corporate performance is actually negative over a broad range of the ownership and control spectrum.

In this regard, the legal and organizational perspectives described in Chapter 2 appear to better account for the U-shaped relationship between ownership concentration and performance in the U.S. context. That is, the working rules (Commons, 1924) of the U.S. during the mid to late 1980's may not have been conducive towards resolving conflicts of interests between either shareholders and managers, or shareholders and creditors (Harris & Raviv, 1991). In such a context, ambiguous control positions may adversely affect corporate performance as shareholders, creditors and managers

focus on control rather than operational issues.

In contrast, other national contexts appear to be marked by particular working rules which forestall, or mitigate conflict between managers and shareholders.

For instance, the powerful and unambiguous role that German banks play as both creditor and shareholder undoubtedly mitigates against many types of conflict between stakeholders in Germany.

While the results discussed here suggest that national context acts as an important moderator of corporate governance relationships, care must be taken in attributing particular findings to specific elements of a nation's institutional context. Still, certain features of particular national contexts may be of help in understanding these results.

The Canadian economy is marked by high levels of concentration in corporate ownership. The concentration of corporate ownership in the hands of a few wealthy Canadian families suggests that frictions in manager-shareholder relationships may be less of a concern than in the U.S. That is, the high levels of ownership concentration in Canada suggests that the control of corporations is rarely ambiguous. In most cases, Canadian shareholders have both the incentive and wherewithal to effectively monitor their managerial agents.

Also, the concentrated ownership stakes of Canadian shareholders suggests that their risk profiles are more like

their managerial agents than their diversified counterparts in the U.S. The unique positive relationship between ownership concentration and diversification among Canadian firms is consistent with this interpretation.

In the French context, the state undoubtedly plays an important role shaping the relationship between various organizational stakeholders. Indeed, the French context is marked by more overt government intervention than all other countries examined here.

For instance, the interventionist posture of the French government may signal a fairly narrow range of acceptable norms regarding corporate activities which may effectively limit the scope for divergent interests between shareholders and managers. The low dividend payout ratios of French firms is consistent with this interpretation (Table 23).

Features of the U.K. context such as the relatively dispersed stock ownership of its firms (Table 23) as well as the country's sophisticated banking system, capital markets and comprehensive disclosure requirements suggest that corporate governance relationships in the U.K. should resemble those of the U.S.

Notwithstanding these similarities, the pattern of corporate governance relationships in the U.K. differ markedly from both agency theory expectations as well as those found in the U.S.

Indeed, in addition to the absence of a direct

relationship between ownership concentration and firm performance, U.K. firms exhibit the fewest significant ownership concentration-strategy relationships in this study. Moreover, contrary to both agency theory expectations and the U.S. case, U.K. firms exhibit a positive relationship between ownership concentration and diversification.

Despite the far reaching economic reforms of successive Conservative governments in the 1980's, many vestiges of the tradition based U.K. economy undoubtedly remain. Indeed, insights from sociology suggest that norms of business conduct and relationships between organizational stakeholders are often steeped in traditions related to class structure and historical patterns of exchange (Conlon & Parks, 1990; Eisenhardt, 1988; Hamilton & Biggart, 1988). Under such conditions, established practices may become so firmly embedded within social structures that changes occur very slowly (Granovetter, 1989).

The deviation of many U.K. corporate governance relationships from both agency theory expectations as well as the U.S. case, suggests that traditional stakeholder roles and norms of business conduct still play an important role in patterning exchange in the U.K. context.

In Chapter 8, this study's results are discussed in more general terms with the intent of offering some suggestions for future research.

CHAPTER 8

Concluding Comments

The results presented in this study carry a number of important implications for researchers, managers and public policy makers. Throughout the previous chapter, particular sets of findings were discussed and related back both to the research hypotheses developed in Chapter 3 and existent theory.

In contrast, the purpose of this chapter is to bring into the foreground many of the important practical and theoretical implications of this study's findings which may have been implied, but kept in the background until this juncture.

In doing so, the major findings of this study are recapitulated. In addition, some practical and theoretical implications are highlighted and suggestions regarding research avenues worth pursuing in the future are offered.

A. Ownership Concentration Does Not Influence Financial Performance Outside of the U.S. Context.

This study's findings do not support the agency theory-separation of ownership and control hypothesis of a positive relationship between ownership concentration and financial performance (Berle & Means, 1932).

Indeed, in that no consistent linear relationship between ownership concentration and firm performance is found, the results offer quite strong support for the alternative property rights thesis (Demsetz, 1983).

The absence of a direct relationship between ownership concentration and firm performance in the Canadian, French, German and U.K. contexts may be explained in terms of socio-political dynamics both external and internal to the firm. That is, these findings suggest that the multiple environmental constraints highlighted by property rights and organizational theorists are more binding than those imposed upon management by shareholders.

Insights from the organizational perspective outlined in Chapter 2 suggest that one of the major functions of top executives is to deal with key contingencies by effectively managing their firm's task environment (Mintzberg, 1983; Thompson, 1967). Viewed in such a manner, corporations are essentially 'markets for influence' (Pfeffer & Salancik, 1978) where a broad array of economic, social and political forces exert an influence over the corporation.

Indeed, the external and internal constraints placed upon

corporations (and their managers) are numerous (Dill, 1964; Mintzberg, 1983; Murray, 1978).

External constraints on the firm may include; increased competition due to the globalization of markets (Kaulmann, 1987), competitive product and factor markets (Demsetz, 1973; Schmalensee, 1985; Wernerfelt & Montgomery, 1988), efficient capital markets and the market for corporate control (Jensen, 1988; Manne, 1964; Scherer, 1989), 'big' labour and government (Galbraith, 1967), as well as the bargaining power of buyers, suppliers and the availability of substitute products and services (Porter, 1980).

The firm (and its managers) may also be faced with a number of internal constraints (Mintzberg, 1983), such as the ability of individual owners (Morck, Shleifer & Vishny, 1989; Weisbach, 1988) and employees (Bower, 1970; Mechanic, 1962) to exert significant influence over corporate affairs as well as bureaucratic inertia (Allison, 1971; Braybrooke & Lindblom, 1963) and organizational politics (Pfeffer & Salancik, 1978).

As such, shareholder pressure is but one of the constraints faced by managers (Hambrick & Finkelstein, 1987). The results reported in this study indicating no consistent relationship between ownership concentration and firm performance strongly suggest that in a large number of cases, pressure from concentrated owners is not the binding constraint.

These findings suggest a few avenues for further

research.

First, the role of top management in the organizational coalition (Cyert & March, 1963) is quite unique (Mintzberg, 1973). That is, while one of their principal functions is to manage the constraints placed upon the firm by various stakeholders, they are an important constituency with a significant vested interest in corporate actions and outcomes as well (Leblevici & Feigenbaum, 1986).

More research is required to better understand how managers cope with the constraints imposed upon them by other stakeholders while satisfying their own personal aspirations. The exploration of this research question will likely require a 'finer grained' (Harrigan, 1983) methodological approach than is generally used in corporate governance research. To this end, case studies and more 'process' oriented strategy research seem well suited to probe this important issue which is central to the study of corporate governance and strategic management.

Second, this study's finding that ownership concentration is not generally related to corporate performance leaves hanging the important question; what are the binding constraints?

In order to address this issue, research which cuts across both disciplinary boundaries (Caves, 1980; Porter, 1981; Teece, 1984) and multiple levels of analysis (Dansereau & Markham, 1987; Glick, 1985; Mossholder & Bedian, 1983;

Rousseau, 1985) is required.

At least from a theoretical standpoint, corporate performance is rooted in factors at multiple-levels of analysis. Unfortunately, individual streams of research focus on conditions at a particular level of analysis and either ignore, or 'control' for other sets of factors¹.

By pioneering a statistical method of decomposing the variance in profit rates and apportioning it to various loci of causal factors, Schmalensee (1985) offers a methodological approach that holds much promise in terms of bettering our collective understanding of the binding constraints on firm performance. Indeed, Schmalensee's frequently cited article has spurred a series of similar empirical investigations (Hansen & Wernerfelt, 1989; Kessides, 1987; Rumelt, 1991; Wernerfelt & Montgomery, 1988).

A variation of Schmalensee's methodological approach could be a useful starting point for further exploration of corporate governance dynamics. That is, the variance decomposition approach appears particularly well suited to mapping out the nature and loci of constraints faced by managers as well as the degree of discretion afforded them. This approach may also be a useful way of assessing the extent to which ownership characteristics impact upon firm

¹ For instance, research in strategic management emphasizes organizational-level processes, agency theory focuses on ownership structure and traditional industrial economics (eg. Bain, 1956) concentrates on the structure of product and factor markets.

performance, as well as the industry and other contextual conditions that influence the relative impact that managers and shareholders have on corporate performance. In particular, this approach hold promise with respect to improving our understanding of the contextual conditions which afford managers the widest degree of discretion.

Third, monitoring by concentrated owners is only one of many alternative means of controlling managerial behaviour (Eisenhardt, 1985; Morck et al, 1989). Indeed, the ownership concentration-performance results presented here suggest that it may be a very blunt control mechanism. Other control mechanisms such as board of director monitoring (Baysinger & Hoskisson, 1988; Kesner, 1987) and executive compensation plans tied to firm performance (Coughlan & Schmidt, 1985; Murdoch, 1989; Murphy, 1985) may operate either concurrently, or independently with stock concentration.

A research issue worth pursuing is whether particular corporate governance instruments act as alternative, or complementary mechanisms of controlling managerial behaviour. If corporate governance mechanisms such as shareholder and director monitoring and executive compensation plans are alternative, rather than complementary control mechanisms, then studies (such as this) which examine only particular control instruments may give a misleading indication of the relative control of owners and managers.

Further research regarding the interplay of various

instruments of manager-shareholder harmonization is particularly relevant given the mixed and inconclusive state of the literature on many important corporate governance issues. Further study is also warranted because of the growing concern in corporate boardrooms, among the general public and in public policy circles regarding how best to resolve persistent agency problems.

B. There is a U-Shaped Curvilinear Relationship Between Ownership Concentration and Financial Performance in the U.S. Context.

In an earlier chapter (Section 6.6), some ancillary results were reported which indicate that in the U.S., there is a distinct U-shaped relationship between ownership concentration and three measures of firm performance. Several important theoretical and practical conclusions may be drawn from these findings.

From a theoretical standpoint, these findings point to a possible cause of the mixed and inconclusive state of the literature regarding the ownership concentration-performance relationship. That is, past research has most often been guided by the important assumption that any relationship between ownership concentration and firm performance would be linear in nature.

The findings presented here indicate that the linearity assumption is potentially misleading as it may obscure the true nature of corporate governance relationships. As such,

future research in the area of corporate governance needs to assess the appropriateness of assuming that the relationships between important constructs are linear.

In this regard, further theoretical development and synthesis is required to better understand why key corporate governance relationships may be non-linear. Further, analytical approaches which are capable of detecting non-linear relationships need to be employed more often. In this study a fairly standard OLS approach was employed to detect the curvilinear relationship between ownership concentration and firm performance amongst U.S. firms. Other methods such as the piece-wise regression approach used by Morck et al (1988) may be useful as well.

The results reported here also provide some additional support for the hypothesis that national context moderates the relationship between ownership concentration and firm performance.

Indeed, U.S. firms are unique in the context of this study in terms of their curvilinear relationship between ownership concentration and firm performance.

This finding indicates that national context is a useful contingency variable (moderator) which may help researchers better understand important economic relationships (Miller, 1981). These findings also suggests that researchers need to more explicitly consider and discuss the generalizability of their findings. In this regard, more cross-national studies

appear warranted (Williamson, 1991).

In more practical terms, the curvilinear relationship between ownership concentration and firm performance suggests that ambiguous control positions of shareholders and managers have a deleterious impact upon corporate performance. In other words, mid-range levels of stock ownership are associated with the lowest levels of accounting profits and market return.

Indeed, agency problems characterized by persistent tensions between shareholders, managers and creditors have become a salient feature of stakeholder relations in many U.S. firms (Harris & Raviv, 1991). This jockeying for position may detract from operational matters and may foster both risk aversion (Hayes & Abernathy, 1980) and short-term decision making (Jacob, 1991).

As such, firms in national contexts such as Germany and Japan where relationships between corporate stakeholders are fairly collegial in nature, may enjoy a competitive advantage over their U.S. counterparts whose stakeholder relations are distinctively more adversarial (Aoki, 1990; Williamson, 1991). In other words, a nation's corporate governance environment and its ability to effectively resolve agency problems between important corporate stakeholders may be a source of competitive advantage for that nation's firms (Porter, 1990).

Further research explicitly examining the impact of stakeholder conflict on both the time horizon and risk aversion of decision making appears warranted.

C. Ownership Concentration Influences a Broad Array of Strategic Decisions.

In this study, very strong support is found for the general proposition that ownership concentration influences a wide range of strategic choices made by managers.

These findings likely reflect the risk profiles and goal preferences of major shareholders and management (and their interaction). Unfortunately, relatively little is known about the actual risk profiles and goal preferences of major stakeholders. That is, empirical investigations in the area of corporate governance typically impute rather stark and rigid behavioural assumptions (Perrow, 1986) and goal preferences on both managers and shareholders on the basis of a *a priori* theorizing rather than direct empirical evidence.

For instance, in the agency perspective, managers are characterized as opportunistic (Jensen & Meckling, 1976), risk-averse (Amihud & Lev, 1981), self-serving entities (Bentson, 1985; McGuire, 1990b, Picton, 1990) who make strategic decisions and set policy in order to maximize some sort of utility function which includes personal wealth and power and prestige (Williamson, 1964).

Similarly, shareholders are treated as a homogenous group of individuals with identical risk profiles and goal preferences. Research based upon these stark assumptions implicitly assumes that all shareholders are sophisticated and diversified investors who hold balanced portfolios of stocks. Indeed, this type of investor should be risk neutral with

respect to the returns from any particular investment in their portfolio.

The same risk neutral assumption is difficult to make for other types of shareholders such as the small undiversified investor, the employee who holds company stock, or stockholders who are also customers for the firm's products or services.

Moreover, as noted by Vickers and Yarrow (1988), even in a world of no uncertainty, asymmetric information, differential taxation and incomplete capital markets, shareholder interests may diverge, or at least not be coincident. Even if shareholder interests were all identical, it is very likely that there would be a lack of unanimity in their rankings of alternative managerial policies.

All of these factors suggest that neither shareholder preferences, nor risk profiles are as homogenous as is typically assumed.

Since the common use of 'straw-person' characterizations quite conceivably introduces a non-trivial amount of measurement error into corporate governance research, further research geared towards providing a finer grained understanding of the goal preferences and risk profiles of key corporate governance actors is needed. In particular, further research which discriminates between different types of shareholders (eg. families, managers, institutions, 'insiders', employee stock ownerships plans) is required. More

case studies, questionnaire and interview based research, as well as multi-method studies (Snow and Hambrick, 1980) would be useful in this regard.

D. There is an Indirect Relationship Between Ownership Concentration and Firm Performance.

As noted above, at least among non-U.S. firms, no consistent relationship between ownership concentration and firm performance is found in this study.

As such, in the strictest sense, the findings presented here do not support the hypothesis that corporate strategy moderates the ownership concentration-performance relationship. However, in a looser sense, this study offers at least an indication that there is an indirect relationship between ownership concentration and firm performance. That is, numerous instances are found at the cross-national and country-levels where ownership concentration influences strategic decisions which in turn influence corporate performance.

The findings reported in this study suggest that more research is required regarding the processual dynamics which underlie the entire ownership concentration-strategy-performance relationship.

Research in corporate governance has typically operationalized strategic conduct in terms of discrete strategic decisions which involve the allocation and distribution of resources.

In this regard, the relative influence which major shareholders have on both strategy formulation and implementation (Chandler, 1962) is an issue worth exploring. Indeed, the influence of shareholders may be more of a binding consideration in strategy formulation than in implementation.

For instance, shareholders may influence formulation decisions such as how much to allocate to R&D and capital expenditures and the extent to which firms pursue market development strategies, but may be less influential in terms of decisions which are more difficult to monitor such as how strategies are implemented (Braybrooke & Lindblom, 1963; Bower, 1970).

Also, analytical approaches which measure corporate strategy in terms of 'gestalts' (Miller, 1981), or 'configurations' (Miles & Snow, 1978; Miller & Friesen, 1977; Mintzberg, 1979) rather than single decision parameters may provide useful insights regarding corporate governance processes. That is, single item indicators of firm strategy may give a misleading indication of the central thread, or logic behind strategic behaviour. Such research may be useful in developing a clearer understanding of the dynamics which underlie the ownership concentration-strategy-performance relationship.

E. National Context Moderates a Number of Important Economic Relationships.

Perhaps the most compelling set of findings reported in this study relate to the moderating influence of national context on a number of important economic relationships. Indeed, the important role that national characteristics play in determining the direction and strength of key corporate governance relationships is a recurring theme in this study. In particular,

1. As indicated by the results presented in Section 6.6, national context moderates the nature of the relationship between ownership concentration and firm performance. That is, the U.S. context is unique in terms of its U-shaped curvilinear relationship between ownership concentration and firm performance. In all other national contexts examined in this study, there is no consistent direct relationship between ownership concentration and firm performance.
2. As indicated by the results discussed in Section 7.3, national context moderates both the direction and magnitude of the relationship between ownership concentration and a broad array of strategic variables.
3. The results discussed in Section 7.4 demonstrate that national context also moderates the entire ownership concentration-strategy-performance relationship.

Additional evidence regarding the important role national context plays in shaping the relationship between economic

variables is provided by the MANCOVA results summarized in Appendix B.

These ancillary results strongly indicate that national context moderates the relationship between corporate strategy and firm performance which is fundamental to the study of strategic management.

That is, after controlling for firm size, industry context, time and foreign control, it is found that...

- a. Eight of ten country-pairs exhibit statistically significant differences in their relationships between ROA and sales growth.
- b. Five of ten country-pairs exhibit statistically significant differences in their relationships between ROA and geographic scope.
- c. Six of ten country-pairs exhibit statistically significant differences in their relationships between ROA and the NBIZ diversification measure.
- d. Four of ten country-pairs exhibit statistically significant differences in their relationships between ROA and the WD diversification measure.
- e. Three of ten country-pairs exhibit statistically significant differences in their relationships between ROA and R&D expenditures.
- f. Three of ten country-pairs exhibit statistically significant differences in their relationships between ROA and capital expenditures.

- g. Seven of ten country-pairs exhibit statistically significant differences in their relationships between ROA and dividend payout ratios.
- h. Seven of ten country-pairs exhibit statistically significant differences in their relationships between ROA and financial leverage.

Taken together, these results provide compelling evidence regarding the importance of national characteristics on a broad range of economic relationships which are fundamental to the study of both corporate governance and strategic management.

Several important practical and theoretical conclusions can be drawn from these findings.

First, these findings suggest that researchers need to continue to search for insightful contingency factors which may be of help in explaining important relationships better (Miller, 1981).

Second, the findings presented here indicate that researchers need to more carefully consider the context in which relationships are embedded (Granovetter, 1985; Hamilton & Biggart, 1988).

In this study, the importance of national context is explicitly evaluated. Studies examining the importance of the temporal context on corporate governance relationships also appear warranted.

Indeed, the vast majority of corporate governance

research has been cross-sectional in nature and have used data over ten years old. Notwithstanding problems of data availability, many changes (eg. the increasing importance of institutional investors, an increasingly active market for corporate control, enhancements to corporate disclosure requirements, the globalization of markets...) have occurred to the corporate governance landscape throughout the past decade. These profound changes point to the need for more longitudinal studies of corporate governance.

Third, the findings presented in this study indicate that researchers need to be more careful in assessing and specifying the generalizability of their findings. This issue is especially important in disciplines such as the organizational sciences where practical relevance to managers is of central concern.

Given the ongoing globalization of markets, it is vital that public policy makers and business people who must operate in multiple national contexts know the extent to which business and economic relationships found in the U.S. are generalizable to other national contexts. As such, much more cross-national strategic management and corporate governance research appears warranted.

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Appendix A

Firms Studied Broken Down By Country and Industry

Canadian Firms

NAME	INDUSTRY
ABITIBI-PRICE INC.	PAPR
AGRA INDUSTRIES LTD.	CONS
ALBERTA NATURAL GAS CO. LTD.	CHEM
ALGOMA CENTRAL CORPORATION	TRAN
BCE MOBILE COMMUNICATIONS INC.	TRON
BOMBARDIER INC.	MACH
BOW VALLEY INDUSTRIES LTD.	OIL
BP CANADA INC.	OIL
CAE INDUSTRIES LTD.	TRON
CAMPBELL RESOURCES INC.	OIL
CANADIAN OCCIDENTAL PETROLEUM LTD.	OIL
CANADIAN PACIFIC FOREST PRODUCTS LTD.	PAPR
CANADIAN TIRE CORP. LTD.	RETL
CCL INDUSTRIES LTD.	CHEM
CELANESE CANADA INC.	CHEM
COHO RESOURCES LIMITED	OIL
CONWEST EXPLORATION COMPANY LTD	OIL
DALMYS (CANADA) LTD.	RETL
DOMAN INDUSTRIES LTD.	CONS
DONOHUE INC.	PAPR
DU PONT CANADA	CHEM
DYLEX LTD.	RETL
FINNING LTD	MACH
FLETCHER CHALLENGE CANADA LTD.	PAPR
FORD MOTOR CO. OF CANADA LTD.	AUTO
GANDALF TECHNOLOGIES INC.	TRON
GEORGE WESTON LIMITED	RETL
GSW INC.	CONS
GULF CANADA RESOURCES LIMITED	OIL
HAWKER SIDDELEY CANADA INC.	MACH
HAYES - DANA INC.	AUTO
HUDSON'S BAY COMPANY	RETL
IMPERIAL OIL LIMITED	OIL
INTERNATIONAL FOREST PRODUCTS LTD	CONS
JOHN LABATT LIMITED	FOOD
LAFARGE CANADA INC.	CONS

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

Canadian Firms

NAME	INDUSTRY
LAWSON MARDON GROUP	PAPR
LOBLAW COMPANIES LIMITED	RETL
MAGNA INTERNATIONAL INC.	AUTO
MANITOBA POOL ELEVATORS	FOOD
MARK'S WORK WEARHOUSE LTD.	RETL
MITEL CORPORATION	TRON
MOLSON COMPANIES LIMITED	FOOD
MORRISON PETROLEUM	OIL
NATIONAL SEA PRODUCTS LTD.	FOOD
NEWFOUNDLAND CAPITAL CORP. LTD.	TRAN
NOMA INDUSTRIES LIMITED	ELEC
NORANDA FOREST INC.	PAPR
NORANDA INC.	CONS
NORCEN ENERGY RESOURCES LIMITED	OIL
NORTHERN TELECOM LIMITED	TRON
NORTH CANADIAN OILS LIMITED	OIL
NOWSCO WELL SERVICE LTD.	OIL
NUMAC OIL & GAS LTD.	OIL
OCELOT INDUSTRIES LTD.	OIL
PANCANADIAN PETROLEUM LIMITED	OIL
PENNINGTON'S STORES LTD.	RETL
PEOPLES JEWELERS	RETL
POCO PETROLEUMS LTD.	OIL
PWA CORPORATION	TRAN
RANGER OIL LIMITED	OIL
RAYROCK YELLOWKNIFE RESOURCES	OIL
REITMAN'S LTD.	RETL
RENAISSANCE ENERGY LTD.	OIL
REPAP ENTERPRISES INC	PAPR
ROLLAND INC.	PAPR
SCEPTRE RESOURCES LTD.	OIL
SCOTT PAPER LTD.	PAPR
SCURRY-RAINBOW OIL LTD.	OIL
SEARS CANADA INC.	RETL
SHELL CANADA LTD.	OIL
SICO INC.	CHEM
SILCORP LTD	RETL

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

Canadian Firms

NAME	INDUSTRY
SINTRA LTD.	CONS
SNC GROUP	CONS
SPAR AEROSPACE LIMITED	TRON
TCG INTERNATIONAL INC.	AUTO
TELEGLOBE INC.	TRON
THE HORSHAM CORPORATION	OIL
TOROMONT INDUSTRIES LTD	ELEC
TOTAL PETROLEUM (NORTH AMERICA) LTD.	OIL
TRIMAC LIMITED	TRAN
T.C.C. BEVERAGES LTD	FOOD
UAP INC.	AUTO
UNITED FARMERS ALBERTA CO-OP LTD.	RETL
UNITED WESTBURNE INC.	ELEC
VARITY CORPORATION	MACH
WAJAX LTD.	MACH
WELDWOOD OF CANADA LTD.	CONS
WEST FRASER TIMBER CO.	CONS
WOODWARD'S LIMITED	RETL
XEROX CANADA	MACH

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

French Firms

NAME	INDUSTRY
AIR INTER SA	TRAN
ALCATEL ALSTHOM CIE	TRON
ARJOMARI PRIOUX SA	PAPR
AUSSEDAT REY SA	PAPR
BAZAR DE L'HOTEL DE VILLE SA	RETL
BEGHIN-SAY SA	FOOD
BERTRAND FAURE SA	AUTO
BONGRAIN SA	FOOD
BON MARCHE	RETL
BOUYGUES SA	CONS
BP FRANCE	OIL
BSN S.A.	FOOD
CARREFOUR S.A.	RETL
CASE POCLAIN	MACH
CHAUSSON (SA DES USINES CHAUSSON)	AUTO
CIE. DES SALINS DU MIDI	FOOD
CIE. FRAN. D'ETUDES ET DE CONSTRUC	CONS
COLAS	CONS
COMPAGNIE DE FIVES-LILLE SA	MACH
COMPAGNIE DE SAINT-GOBAIN S.A.	CONS
COMPAGNIE GENERALE DE GEOPHYSIQUE	OIL
COMPAGNIE LA HENIN S.A.	FOOD
COMPTOIRS MODERNES S.A.	RETL
DEGREMONT	CONS
DE DIETRICH ET CIE	ELEC
DOCKS DE FRANCE CENTRE SA	RETL
DOCKS DE FRANCE S.A.	RETL
ESSO S.A.F.	OIL
ETS. JEAN LEFEBVRE	CONS
FOUGEROLLE SA	CONS
FROMAGERIES BEL SA	FOOD
GALERIES LAFAYETTE SA	RETL
GERLAND	CHEM
GRANDS MOULINS DE PARIS SA	FOOD
GROUPE CASINO GUICHARD PERRACHON	RETL
GROUPE EUROMARCHE S.A.	RETL
GROUPE ORTIZ	FOOD

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

French Firms

NAME	INDUSTRY
GRUPE SEB S.A.	ELEC
GTM ENTREPOSE SA	CONS
HERLICQ SA	CONS
HUTCHINSON	CHEM
LAFARGE COPPEE S.A.	CONS
LA COMPAGNIE IMMOBILIERE PHENIX	CONS
LA RADIOTECHNIQUE SA	TRON
LA ROCHETTE	PAPR
LEGRAND S.A.	ELEC
LEGRIS INDUSTRIES SA	MACH
LVMH MOET-HENNESSY LOUIS VUITTON	FOOD
L'AIR LIQUIDE SA	CHEM
MERLIN GERIN S.A.	ELEC
MICHELIN CIE. GEN'L DES ETAB.	CHEM
MOULINEX S.A.	ELEC
NORD EST S.A.	PAPR
NOUVELLES GALERIES REUNIES SA	RETL
OLIPAR	FOOD
ORSAN S.A.	CHEM
PERNOD RICARD S.A.	FOOD
PEUGEOT S.A.	AUTO
POLIET S.A.	CONS
REMY & ASSOCIES	FOOD
ROUGIER SA	CONS
SAGEM SA	TRON
SAINT LOUIS S.A.	FOOD
SCHNEIDER SA	ELEC
SCOA SA	RETL
SCREG	CONS
SIBILLE SA	PAPR
SOCIETE AUXILIAIRE D'ENTREPRISES SA	CONS
SOCIETE DES CIMENTS FRANCAIS SA	CONS
SOC. ALSAC. DE SUPERMARCHES	RETL
SOC. ANONYME TELECOMMUNICATION	ELEC
SOGEA	CONS
SOMMER-ALLIBERT S.A.	CHEM
SOURCE PERRIER SA	FOOD

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

French Firms

NAME	INDUSTRY
SPIE-BATIGNOLLES SA	CONS
STE. D'OXYGEN ET D'ACTYLENE	CHEM
STRAFOR FACOM SA	MACH
TELEMECANIQUE	TRON
THOMSON-CSF S.A.	TRON
UNION DE TRANSPORTS AERIENS	TRAN
VALEO S.A.	MACH
VINIPRIX S.A.	RETL

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

German Firms

NAME	INDUSTRY
ADAM OPEL AG	AUTO
AEG AG	TRON
ASEA BROWN BOVERI AG	CONS
ASKO DEUTSCHE KAUFHAUS AG	RETL
BARMAG AG	MACH
BASF AG	CHEM
BAYERISCHE MOTOREN WERKE AG	AUTO
BAYER AG	CHEM
BINDING BRAUEREI AG	FOOD
BOSCH-SIEMENS HAUSGERAETE GMBH	ELEC
BRAAS & CO. GMBH	CONS
BRAU UND BRUNNEN AG.	FOOD
CONOCO MINERALOEL GMBH	OIL
CONTINENTAL AG	CHEM
DAIMLER-BENZ AG	AUTO
DAVY MCKEE AG	CHEM
DEUTSCHES MILCH KONTOR GMBH	FOOD
DEUTSCHE BP AG	OIL
DEUTSCHE BUNDESBAHN	TRAN
DEUTSCHE SHELL AG	OIL
DIDIER-WERKE AG	CONS
DOUGLAS HOLDING AG	RETL
DYCKERHOFF AG	CONS
DYCKERHOFF & WIDMANN AG	CONS
EDEKA ZENTRALE AG	RETL
ESCHWEILER BERGWERKS-VEREIN AG	MACH
ESSO AG	OIL
EUROPA CARTON	PAPR
FELDMUEHLE	PAPR
FELDMUEHLE NOBEL AG	PAPR
FLUGHAFEN FRANKFURT/MAIN AG	TRAN
FORD-WERKE AG	AUTO
FRESENIUS AG	CHEM
FRIEDRICH DECKEL AG	MACH
GILDEMEISTER AG	MACH
GLUNZ AG	CONS
GRUNDIG AG	TRON

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

German Firms

NAME	INDUSTRY
HAINDL PAPIER GMBH	PAPR
HAPAG-LLOYD AG	TRAN
HARTMANN & BRAUN AG	TRON
HEIDELBERGER ZEMENT AG	CONS
HENKEL KGAA	CHEM
HERBERTS GMBH	CHEM
HERLITZ AG	PAPR
HOECHST AG	CHEM
HOLSTEN-BRAUEREI AG	FOOD
HORTEN AG	RETL
IBM DEUTSCHLAND GMBH	MACH
ITT GESELLSCHAFT FUR BETEILIGUNGEN	TRON
IVECO - MAGIRUS AG	AUTO
IWKA AG	MACH
KALI-CHEMIE AG	CHEM
KARSTADT AG	RETL
KAUFHOF HOLDING AG	RETL
KRAUSS MAFFEI	MACH
KSB AG	MACH
LEIFHEIT AG	ELEC
LINDE AG	MACH
LINOTYPE-HELL AG	TRON
MAHLE GMBH	MACH
MANNESMANN AG	MACH
MAN AG	MACH
MAN ROLAND DRUCKMASCHINEN AG	MACH
MARQUARD & BAHLS	OIL
MASSA AG	RETL
MD PAPIER GMBH	PAPR
MERCK E. GROUP	CHEM
MESSER GRIESHEIM GMBH	CHEM
MOBIL OIL AG	OIL
MOTO METER	AUTO
ORENSTEIN & KOPPEL AG (O & K)	MACH
OTTO VERSAND GMBH	RETL
PFAFF G.M. AG	ELEC
PHILIPP HOLZMANN AG	CONS

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

German Firms

NAME	INDUSTRY
PHILIPS GMBH	TRON
PHILIPS KOMMUNIKATIONS INDUSTRIE AG	TRON
RAAB KARCHER AG	OIL
RHEINBRAUN AG.	OIL
RHEINMETALL BERLIN AG	MACH
ROBERT BOSCH GMBH	AUTO
RUHRKOHLE AG (RAG)	OIL
RWE-DEA AG FUER MINERALOEL	OIL
SAARBERGWERKE AG	OIL
SIGRI GMBH	CONS
SPAR HANDELS-AG	RETL
STANDARD ELEKTRIK LORENZ AG (SEL)	TRON
STIHL ANDREAS	MACH
STRABAG BAU AG	CONS
TELENORMA GMBH	ELEC
TH. GOLDSCHMIDT AG	CHEM
TRAUB	MACH
VARTA AG	ELEC
VDO ADOLF SCHINDLING AG	TRON
VORWERK & CO.	ELEC
WACKER-CHEMIE GMBH	CHEM
WALTER-THOSTI-BOSWAU (WTB)	CONS
WAYSS & FREYTAG AG	CONS
ZANDERS FEINPAPIERE AG	PAPR
ZEPPELIN - METALLWERKE GMBH	CONS

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.K. Firms

NAME	INDUSTRY
ADWEST GROUP PLC	AUTO
ALLIED COLLOIDS GROUP P.L.C.	CHEM
APPLE YARD GROUP PLC	RETL
ASDA GROUP PLC	RETL
ASPREY & COMPANY PLC	RETL
ASSOCIATED BRITISH FOODS PLC	FOOD
ASSOCIATED BRITISH PORTS HOLDINGS T	RAN
ASSOCIATED FISHERIES PLC	FOOD
ASTECH (BSR) PLC	ELEC
A.B. ELECTRONIC PRODUCTS GROUP PLC	ELEC
BARRY WEHMILLER INTERNATIONAL PLC	MACH
BBA GROUP PLC	AUTO
BERNARD MATTHEWS PLC	FOOD
BLACKS LEISURE GROUP PLC	RETL
BLAGDEN INDUSTRIES PLC.	CHEM
BLUE CIRCLE INDUSTRIES PLC	CONS
BOOTS COMPANY PLC	RETL
BOWATER PLC	PAPR
BOWTHORPE HOLDINGS PLC	ELEC
BRAKE BROS. PLC	FOOD
BRAMMER PLC	ELEC
BRENT CHEMICALS INTERNATIONAL	CHEM
BRITISH AIRWAYS PLC	TRAN
BSG INTERNATIONAL PLC	AUTO
BUNZL PLC	PAPR
BURMAH CASTROL PLC	OIL
CADBURY SCHWEPPE'S P L C	FOOD
CAKEBREAD ROBEY & CO PLC	CONS
CALOR GROUP PLC	OIL
CAMBRIDGE ELECTRONIC INDUSTRIES PLC	TRON
CAPE PLC	CONS
CHARTER CONSOLIDATED P.L.C.	MACH
CHLORIDE GROUP PLC	AUTO
CONDER GROUP PLC	CONS
COSTAIN GROUP PLC	CONS
COWIE T. PLC	MACH
CRAY ELECTRONICS HOLDINGS PLC	TRON
DALGETY PLC	FOOD

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.K. Firms

NAME	INDUSTRY
ECC GROUP PLC	CONS
ELECTROCOMPONENTS PLC	ELEC
ENTERPRISE OIL PLC	OIL
ETAM PUBLIC LIMITED COMPANY	RETL
FARNELL ELECTRONICS PLC	ELEC
FENNER PLC	MACH
FERRANTI INTERNATIONAL PLC	MACH
FORD MOTOR LTD.	AUTO
FOSTER WHEELER PLC	CONS
GEEST HOLDINGS LTD.	FOOD
GENERAL ELECTRIC COMPANY (GEC) PLC	TRON
GEORGE WIMPEY PLC	CONS
GOAL PETROLEUM GROUP PLC	OIL
GREAT UNIVERSAL STORES PLC	RETL
GREENE KING PLC	FOOD
GUINNESS PLC	FOOD
HADEN MACLELLAN HOLDINGS PLC	MACH
HALMA P.L.C.	MACH
HIGGS AND HILL PLC	CONS
HIGHLAND DISTILLERIES COMPANY PLC	FOOD
HONEYWELL LTD	TRON
ICELAND FROZEN FOODS HOLDINGS PLC	FOOD
IMPERIAL CHEMICAL INDUSTRIES PLC	CHEM
JOHN WADDINGTON PLC	PAPR
J SAINSBURY PLC	RETL
KALON GROUP PLC.	CHEM
KINGFISHER PLC	RETL
KWIK-FIT (TYRES & EXHAUSTS)	AUTO
KWIK SAVE GROUP P.L.C.	RETL
LAING (JOHN) PLC	CONS
LAPORTE PLC	CHEM
LASMO PLC	OIL
LEWIS (JOHN) PARTNERSHIP PLC	RETL
LLOYDS CHEMISTS PLC	RETL
LOGICA PLC	TRON
MARKS AND SPENCER P.L.C.	RETL
MARLEY PLC	CONS
MARSHALLS PLC	CONS

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.K. Firms

NAME	INDUSTRY
MARSTON THOMSON & EVERED P.L.C.	FOOD
MEGGITT PLC	TRON
MEYER INTERNATIONAL PLC	CONS
MISYS PLC	TRON
MOBIL OIL COMPANY LTD.	OIL
MOLINS PLC	MACH
MONUMENT OIL & GAS PLC	OIL
MTM PLC	CHEM
NEXT PLC	RETL
NICHOLS J.N. (VIMTO) PLC	FOOD
OCEAN GROUP PLC	TRAN
PENTLAND GROUP PLC	RETL
PHOTO-ME INTERNATIONAL PLC	MACH
PLYSU PLC	CHEM
POLYPIPE PLC	CONS
POWELL DUFFRYN PUBLIC LIMITED	OIL
POWERSCREEN INTERNATIONAL PLC	MACH
RACAL ELECTRONICS PLC	TRON
RAINE INDUSTRIES PLC	CONS
RANKS HOVIS MCDOUGALL PLC	FOOD
RANSOMES PLC	MACH
RATNERS GROUP PLC	RETL
RENISHAW PLC	ELEC
ROTORK PLC	ELEC
SEARS PLC	RETL
SHELL U.K. LTD.	OIL
SIMON ENGINEERING PLC	MACH
SMITHS INDUSTRIES PUBLIC LIMITED	TRON
SMITH (W.H.) GROUP PLC	RETL
SOVEREIGN OIL & GAS PLC	OIL
SPIRAX-SARCO ENGINEERING PLC	MACH
STAVELEY INDUSTRIES PLC	ELEC
STEETLEY PLC	CONS
STOREHOUSE PLC	RETL
TAYLOR WOODROW PLC	CONS
TGI PLC	ELEC
THORN EMI PLC	TRON
TIBBETT & BRITTEN GROUP	TRAN

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.K. Firms

NAME	INDUSTRY
TIPHOOK PLC	TRAN
TRAVIS PERKINS PLC	CONS
TRIMOCO PLC	RETL
ULTRAMAR PLC	OIL
UNIGATE PLC	FOOD
UNILEVER PLC	FOOD
UNITECH PLC	ELEC
VAUXHALL MOTORS LTD.	AUTO
VIBROPLANT PLC	CONS
WALKER GREENBANK PLC	PAPR
WARDLE STOREYS PLC	CHEM
WEIR GROUP PLC	MACH
WESTBURY	CONS
WILLIAMS HOLDINGS PLC	CONS
WILSON BOWDEN PLC	CONS
WILSON (CONNOLLY) HOLDINGS PLC	CONS
WOLSELEY PLC	RETL
YORKSHIRE CHEMICALS PLC	CHEM
YULE CATTO & CO. PLC	CHEM

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.S. Firms

NAME	INDUSTRY
3COM CORPORATION	TRON
AARON RENTS INC.	RETL
ACETO CORPORATION	CHEM
ACME ELECTRIC CORPORATION	ELEC
ADAMS RESOURCES & ENERGY INC.	OIL
ADOBE RESOURCES CORPORATION	OIL
ADVANCE CIRCUITS INC.	TRON
ADVANCE ROSS CORPORATION.	CONS
AIRBORNE FREIGHT CORPORATION	TRAN
AIRGAS INC.	CHEM
ALASKA AIR GROUP INC.	TRAN
ALBERTSON'S INCORPORATED	RETL
ALCIDE CORPORATION	CHEM
ALDUS CORPORATION	TRON
ALEXANDER'S INC.	RETL
ALEXANDER & BALDWIN	TRAN
ALICO INC.	FOOD
ALLEN GROUP INC. (THE)	AUTO
ALPINE GROUP INC.	MACH
ALTRON INC.	TRON
AMDAHL CORPORATION	TRON
AMDURA CORP.	CONS
AMERADA HESS CORPORATION	OIL
AMERICAN BILTRITE INC	CONS
AMERICAN COLLOID COMPANY	CHEM
AMERICAN EXPLORATION CO.	OIL
AMERICAN FRUCTOSE CORPORATION	FOOD
AMERICAN MAIZE-PRODUCTS COMPANY	FOOD
AMERICAN PRECISION INDUSTRIES INC.	MACH
AMERICAN PRESIDENT CO'S. LTD.	TRAN
AMERICAN SOFTWARE INC.	TRON
AMERICAN STORES COMPANY	RETL
AMERICAN WOODMARK CORP.	CONS
AMES DEPARTMENT STORES INC.	RETL
AMISTAR CORPORATION	MACH
AMOCO CORPORATION	OIL
AMP INCORPORATED	TRON
AMRE INC.	CONS

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.S. Firms

NAME	INDUSTRY
AMR CORPORATION	TRAN
AM INTERNATIONAL INC.	MACH
ANALOGIC CORPORATION	TRON
ANAREN MICROWAVE INC.	TRON
ANHEUSER-BUSCH COMPANIES INC.	FOOD
AOI COAL CO.	OIL
APACHE CORPORATION	OIL
APOGEE ROBOTICS INC.	MACH
AQUANAUTICS CORP.	CHEM
ARABIAN SHIELD DEVELOPMENT COMPANY	OIL
ARBOR DRUGS INC.	RETL
ARCHER-DANIELS-MIDLAND COMPANY	FOOD
ARCO CHEMICAL CO.	CHEM
ARDEN GROUP INC.	RETL
ARKLA EXPLORATION CO.	OIL
ARMADA CORPORATION	CHEM
ARMOR ALL PRODUCTS COMPANY	CHEM
ARMSTRONG WORLD INDUSTRIES INC.	CONS
ARNOLD INDUSTRIES	TRAN
ARROW AUTOMOTIVE INDUSTRIES INC.	AUTO
ARVIN INDUSTRIES INC.	AUTO
ASHLAND COAL INC.	OIL
ATHEY PRODUCTS CORP.	AUTO
ATLANTIC RICHFIELD COMPANY	OIL
ATLANTIC SOUTHEAST AIRLINES INC.	TRAN
AUGAT INC.	TRON
AUTODESK INC.	TRON
AVALON CORPORATION	OIL
AYDIN CORPORATION	TRON
BADGER METER INC.	TRON
BADGER PAPER MILLS INC.	PAPR
BAIRNCO CORPORATION	CONS
BALDOR ELECTRIC COMPANY	ELEC
BALDWIN TECHNOLOGY COMPANY INC.	MACH
BALTEK CORPORATION	CONS
BANDAG INCORPORATED	CHEM
BAROID CORP.	OIL
BARRY'S JEWELERS INC.	RETL

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.S. Firms

NAME	INDUSTRY
BEL FUSE INC.	TRON
BERRY PETROLEUM CO.	OIL
BEST BUY CO. INC.	RETL
BETZ LABORATORIES	CHEM
BIG B INCORPORATED	RETL
BIG O TIRES INC	RETL
BIRD CORPORATION.	CONS
BLACK & DECKER CORPORATION (THE)	MACH
BLAIR CORP.	RETL
BLESSINGS CORPORATION	CHEM
BLOUNT INC.	CONS
BMC INDUSTRIES INC.	TRON
BOBBIE BROOKS INC.	RETL
BOISE CASCADE CORP.	PAPR
BORDEN INC.	FOOD
BOWATER INCORPORATED	PAPR
BRADY (W.H.) COMPANY	CHEM
BRAND COMPANIES INC.	CONS
BRENDLE'S INC.	RETL
BRIGGS & STRATTON CORPORATION	MACH
BROWN-FORMAN CORPORATION	FOOD
BROWN GROUP INCORPORATED	RETL
BROWN & SHARPE MANUFACTURING	MACH
BRUNO'S INCORPORATED	RETL
BUILDERS TRANSPORT INC.	TRAN
BURLINGTON COAT FACTORY WAREHOUSE	RETL
BURLINGTON NORTHERN INC	TRAN
BURR-BROWN CORPORATION	TRON
BUSINESSLAND INC.	RETL
CABLETRON SYSTEMS INC.	TRON
CADENCE DESIGN SYSTEMS INC.	TRON
CAGLES INC.	FOOD
CALGON CARBON CORPORATION	CHEM
CALIFORNIA ENERGY COMPANY INC.	OIL
CALMAT CO.	CONS
CAMBREX CORPORATION	CHEM
CAMPBELL SOUP COMPANY	FOOD
CANANDAIGUA WINE COMPANY INC.	FOOD

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.S. Firms

NAME	INDUSTRY
CAROLINA FREIGHT CORPORATION	TRAN
CARTER HAWLEY HALE STORES INC.	RETL
CASCADE CORP.	MACH
CASEY'S GENERAL STORES INC.	RETL
CATERPILLAR INC.	CONS
CENTEX CORPORATION	CONS
CHARMING SHOPPES INC.	RETL
CHARTER COMPANY (THE)	OIL
CHECKPOINT SYSTEMS INC.	TRON
CHEMED CORPORATION	CHEM
CHEMICAL LEAMAN CORPORATION	TRAN
CHERRY CORPORATION (THE)	ELEC
CHESAPEAKE CORPORATION	PAPR
CHEVRON CORPORATION	OIL
CHILD WORLD INCORPORATED	RETL
CHIQUITA BRANDS INTERNATIONAL INC.	FOOD
CHOCK FULL O'NUTS CORPORATION	FOOD
CHRYSLER CORPORATION	AUTO
CHURCH & DWIGHT CO. INC.	CHEM
CINCINNATI MILACRON INC.	MACH
CIRCLE K CORPORATION (THE)	RETL
CIRCUIT CITY STORES INC.	RETL
CLAIRE'S STORES INC.	RETL
CLARK EQUIPMENT COMPANY	MACH
CLAYTON HOMES INC.	CONS
CLOROX COMPANY	CHEM
CLOTHESTIME INC.	RETL
CMI CORPORATION	CONS
CML GROUP INC.	RETL
COACHMEN INDUSTRIES INC.	CONS
COASTAL CORPORATION (THE)	OIL
COCA-COLA COMPANY (THE)	FOOD
COGNITRONICS CORPORATION	TRON
COHU INCORPORATED	TRON
COLGATE-PALMOLIVE COMPANY	CHEM
COMAIR HOLDINGS INC.	TRAN
COMARCO INC.	TRON
COMDIAL CORPORATION	TRON

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.S. Firms

NAME	INDUSTRY
COMPAQ COMPUTER CORPORATION	TRON
COMPRESSION LABS INC.	TRON
COMPUTER PRODUCTS INCORPORATED	TRON
CONAGRA INC.	FOOD
CONNER PERIPHERALS INC.	TRON
CONSOLIDATED FREIGHTWAYS INC.	TRAN
CONSOLIDATED PAPERS INC.	PAPR
CONSOLIDATED RAIL CORP.	TRAN
CONSOLIDATED STORES CORPORATION	RETL
CONTINENTAL AIRLINES HOLDINGS INC.	TRAN
CONTINENTAL MATERIALS CORPORATION	CONS
CONTROL DATA CORPORATION	TRON
CONVEX COMPUTER CORPORATION	TRON
COOPER INDUSTRIES INC.	ELEC
COOPER TIRE & RUBBER COMPANY	CHEM
COORS (ADOLPH) COMPANY	FOOD
CPC INTERNATIONAL INC.	FOOD
CRAY RESEARCH INC.	TRON
CROMPTON & KNOWLES CORPORATION	CHEM
CROWLEY MILNER AND COMPANY	RETL
CROWN BOOKS CORPORATION	RETL
CROWN CENTRAL PETROLEUM CORP.	OIL
CRSS INC.	CONS
CTS CORPORATION	TRON
CUMMINS ENGINE COMPANY INC.	MACH
CYPRESS SEMICONDUCTOR CORP.	TRON
DAHLBERG INCORPORATED	TRON
DAIRY MART CONVENIENCE STORES INC.	RETL
DANA CORPORATION	AUTO
DART GROUP CORPORATION	RETL
DATAFLEX CORPORATION	RETL
DATA I/O CORP.	TRON
DATA SWITCH CORPORATION	TRON
DAYTON HUDSON CORPORATION	RETL
DEAN FOODS COMPANY	FOOD
DEB SHOPS INCORPORATED	RETL
DEKALB ENERGY CO.	OIL
DELCHAMPS INC.	RETL

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.S. Firms

NAME	INDUSTRY
DELTA AIR LINE INCORPORATED	TRAN
DESOTO INC.	CHEM
DETREX CORPORATION	CHEM
DEXTER CORPORATION (THE)	CHEM
DIEBOLD INCORPORATED	MACH
DILLARD DEPARTMENT STORES INC.	RETL
DONALDSON COMPANY INC.	MACH
DOUGLAS & LOMASON CO.	AUTO
DOVER CORPORATION	MACH
DOW CHEMICAL COMPANY	CHEM
DREW INDUSTRIES INCORPORATED	CONS
DREYERS GRAND ICE CREAM INCORPORATED	FOOD
DSC COMMUNICATIONS CORPORATION	TRON
DUCOMMUNICATIONS INC.	TRON
DURAKON INDUSTRIES INC.	AUTO
DURIRON COMPANY INC. (THE)	TRON
DYNAMICS RESEARCH CORP.	TRON
EAC INDUSTRIES INC.	MACH
EASTERN ENTERPRISES	OIL
EATON CORPORATION	AUTO
ECHLIN INC.	AUTO
EDISON BROTHERS STORES INC.	RETL
EDO CORPORATION	TRON
EGGHEAD INC.	RETL
EG & G INC.	TRON
EKCO GROUP INC.	TRON
ELCOR CORPORATION	CONS
ELECTRONIC ASSOCIATES INC.	TRON
EMC CORP.	TRON
EMERALD HOMES L.P.	CONS
ENDEVCO INC.	OIL
ENERGY CONVERSION DEVICES INC.	ELEC
ENERGY VENTURES INC.	OIL
ENTERRA CORPORATION	OIL
EQUITY OIL COMPANY	OIL
ETHYL CORPORATION	CHEM
EVANS INC.	RETL
EVANS & SUTHERLAND COMPUTER CORP.	TRON

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.S. Firms

NAME	INDUSTRY
EXCEL INDUSTRIES INC.	AUTO
EXXON CORPORATION	OIL
E-SYSTEMS INC.	TRON
E & B MARINE INC.	RETL
FABRI-CENTERS OF AMERICA INC.	RETL
FAMILY DOLLAR STORES INC.	RETL
FAY'S INCORPORATED	RETL
FEDDERS CORPORATION	ELEC
FEDERAL EXPRESS CORPORATION	TRAN
FEDERAL PAPER BOARD COMPANY INC.	PAPR
FERRO CORPORATION	CHEM
FINA INC.	OIL
FIRST MISSISSIPPI CORPORATION	CHEM
FLEETWOOD ENTERPRISE INC.	CONS
FLORIDA EAST COAST INDUSTRIES INC.	TRAN
FLOWERS INDUSTRIES INC.	FOOD
FOOD LION INCORPORATED	RETL
FORD MOTOR COMPANY	AUTO
FOSTER WHEELER CORPORATION	MACH
FREDERICK'S OF HOLLYWOOD INC.	RETL
FREEPORT-MCMORAN INC.	CHEM
FROZEN FOOD EXPRESS INDUSTRIES INC.	TRAN
GALVESTON-HOUSTON COMPANY	MACH
GANTOS INC.	RETL
GAP INC. (THE)	RETL
GATEWAY COMM INC	TRON
GENERAL BINDING CORP.	MACH
GENERAL HOST CORPORATION	RETL
GENERAL MILLS INC.	FOOD
GENERAL MOTORS CORPORATION	AUTO
GENICOM CORPORATION	TRON
GENOVESE DRUG STORES INC.	RETL
GEORGIA-PACIFIC CORPORATION	CONS
GEORGIA GULF CORP.	CHEM
GERBER PRODUCTS COMPANY	FOOD
GETTY PETROLEUM CORP.	OIL
GIANT FOOD INC.	RETL
GLATFELTER (P.H.) COMPANY	PAPR

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.S. Firms

NAME	INDUSTRY
GLEASON CORPORATION	MACH
GOLDEN ENTERPRISES INC.	FOOD
GOLDEN POULTRY COMPANY INC.	FOOD
GOODMARK FOODS INC.	FOOD
GOODYEAR TIRE & RUBBER COMPANY	CHEM
GORMAN-RUPP COMPANY (THE)	MACH
GOTTSCHALKS INCORPORATED	RETL
GOULDS PUMPS INCORPORATED	MACH
GRACO INC.	MACH
GREAT ATLANTIC & PACIFIC TEA CO.	RETL
GREAT LAKES CHEMICAL CORPORATION	CHEM
GREENMAN BROS. INC.	RETL
GREINER ENGINEERING INC.	CONS
GROSSMAN'S INC.	RETL
GUARDSMAN PRODUCTS INC.	CHEM
GULF RESOURCES & CHEMICAL CORPORATION	OIL
HADSON CORP.	OIL
HALLIBURTON COMPANY	OIL
HAL INC.	TRAN
HANNAFORD BROS. CO.	RETL
HARKEN ENERGY CORP.	OIL
HARPER GROUP INC. (THE)	TRAN
HASTINGS MANUFACTURING COMPANY	AUTO
HAVERTY FURNITURE COMPANIES INC.	RETL
HEARTLAND EXPRESS INC.	TRAN
HECHINGER COMPANY	RETL
HEILIG-MEYERS COMPANY	RETL
HEIN-WERNER CORPORATION	MACH
HELIX TECHNOLOGY CORPORATION	MACH
HERCULES INCORPORATED	CHEM
HERSHEY FOODS CORPORATION	FOOD
HIGHLAND SUPERSTORES INC.	PETL
HILLS DEPARTMENT STORES INC.	RETL
HIPOTRONICS INC.	TRON
HOLLY CORPORATION	OIL
HOME DEPOT INC. (THE)	RETL
HOME SHOPPING NETWORK INC.	RETL
HONEYWELL INC.	TRON

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.S. Firms

NAME	INDUSTRY
HOUSE OF FABRICS INC.	RETL
HOVNANIAN ENTERPRISES	CONS
HOWELL CORPORATION	OIL
HUBBELL INCORPORATED	ELEC
H.J. HEINZ COMPANY	FOOD
IBP INC.	FOOD
IDEX CORPORATION	MACH
IMCERA GROUP INC.	CHEM
IMC FERTILIZER GROUP INC.	CHEM
IMO INDUSTRIES INC.	TRON
INGERSOLL-RAND COMPANY	MACH
INSTRON CORPORATION	TRON
INTEL CORPORATION	TRON
INTERCONTINENTAL ENTERPRISES INC.	TRAN
INTERGRAPH CORPORATION	TRON
INTERMAGNETICS GENERAL CORPORATION	TRON
INTERNATIONAL BUSINESS MACHINES	TRON
INTERNATIONAL FLAVORS & FRAGRANCES	CHEM
INTERNATIONAL MULTIFOODS CORPORATION	FOOD
INTERNATIONAL PAPER COMPANY	PAPR
INTERNATIONAL SHIPHOLDING	TRAN
INTERTAN INC.	RETL
INTER-TEL INC.	TRON
IPL SYSTEMS INC.	TRON
JACOBSON STORES INCORPORATED	RETL
JAMESWAY CORPORATION	RETL
JAMES RIVER CORPORATION OF VIRGINIA	PAPR
JG INDUSTRIES INC.	RETL
JLG INDUSTRIES INC.	MACH
KAMAN CORPORATION	TRON
KANEB SERVICES INC.	OIL
KANSAS CITY SOUTHERN INDUSTRIES INC	TRAN
KELLOGG COMPANY	FOOD
KENAN TRANSPORT COMPANY	TRAN
KERR-MCGEE CORPORATION	OIL
KIMBERLY-CLARK CORPORATION	PAPR
KIRBY CORPORATION	TRAN
KOLLMORGEN CORPORATION	TRON

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.S. Firms

NAME	INDUSTRY
ROGER COMPANY (THE)	RETL
KUHLMAN CORPORATION	ELEC
K MART CORPORATION	RETL
LAFARGE CORPORATION	CONS
LANCE INC.	FOOD
LASER PRECISION CORP	TRON
LAWTER INTERNATIONAL INC.	CHEM
LEARONAL INC.	CHEM
LEINER (P.) NUTRITIONAL PRODUCTS	FOOD
LILLIAN VERNON CORP.	RETL
LIMITED INC. (THE)	RETL
LIONEL CORP.	RETL
LIQUI-BOX CORPORATION	PAPR
LITTON INDUSTRIES INC.	TRON
LOCTITE CORPORATION	CHEM
LONE STAR INDUSTRIES INC.	CONS
LONGS DRUG STORES CORP.	RETL
LOUISIANA-PACIFIC CORPORATION	CONS
LOUISIANA LAND & EXPLORATION	OIL
LOWE'S COMPANIES INC.	RETL
LUBRIZOL CORPORATION (THE)	CHEM
LURIA (L.) & SON INC.	RETL
LVI GROUP INC. (THE)	CONS
LYONDELL PETROCHEMICAL CO.	CHEM
MACHINE TECHNOLOGY INC.	TRON
MAC DERMID INCORPORATED	CHEM
MAC NEAL-SCHWENDLER CORPORATION	TRON
MANITOWOC COMPANY INC. (THE)	MACH
MANUFACTURED HOMES INC.	RETL
MANVILLE CORPORATION	CONS
MAPCO INC.	OIL
MARITRANS PARTNERS L.P.	TRAN
MARSH SUPERMARKETS INC.	RETL
MASCO CORPORATION	CONS
MASCO INDUSTRIES INC.	CONS
MATERIAL SCIENCES CORPORATION	CHEM
MAXUS ENERGY CORP.	OIL
MAXWELL LABORATORIES INC.	TRON

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.S. Firms

NAME	INDUSTRY
MAYTAG CORP.	ELEC
MAY DEPARTMENT STORES COMPANY	RETL
MCDERMOTT INTERNATIONAL INC.	CONS
MCFARLAND ENERGY INC.	OIL
MEAD CORPORATION (THE)	PAPR
MEASUREX CORPORATION	TRON
MEDUSA CORP.	CONS
MEI DIVERSIFIED INC	FOOD
MELVILLE CORPORATION	RETL
MENTOR GRAPHICS CORPORATION	TRON
MERCANTILE STORES COMPANY INC.	RETL
MERRIMAC INDUSTRIES INC.	TRON
MERRY-GO-ROUND ENTERPRISES INC.	RETL
MESA LIMITED PARTNERSHIP	OIL
MESTEK INC.	MACH
MICHAELS STORES INC.	RETL
MICRON TECHNOLOGY INC.	TRON
MICROPOLIS CORPORATION	TRON
MIDWAY AIRLINES INCORPORATED	TRAN
MILTOPE GROUP INC.	TRON
MITCHELL ENERGY & DEVELOPMENT	OIL
MOBIL CORPORATION	OIL
MODINE MANUFACTURING COMPANY	CONS
MONARCH MACHINE TOOL COMPANY	MACH
MONSANTO COMPANY	CHEM
MOORE PRODUCTS CO.	TRON
MORGAN PRODUCTS LTD.	CONS
MORRISON KNUDSEN CORPORATION	CONS
MOR-FLO INDUSTRIES INC.	CONS
MOSINEE PAPER CORPORATION	PAPR
MOTOROLA INC.	TRON
MOTT'S HOLDING INC.	RETL
MR. GASKET COMPANY	AUTO
MURPHY OIL CORPORATION	OIL
MYERS INDUSTRIES INC.	AUTO
MYERS L.E. CO. GROUP (THE)	CONS
M.D.C. HOLDINGS INC.	CONS
M.S. CARRIERS INC.	TRAN

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.S. Firms

NAME	INDUSTRY
NACCO INDUSTRIES INCORPORATED	MACH
NALCO CHEMICAL COMPANY	CHEM
NASHUA CORPORATION	PAPR
NATIONAL COMPUTER SYSTEMS INC.	TRON
NATIONAL CONVENIENCE STORES	RETL
NBI INC.	MACH
NCR CORPORATION	TRON
NERCO INC.	OIL
NETWORK SYSTEMS CORPORATION	TRON
NEWMARK & LEWIS INC.	RETL
NL INDUSTRIES INC.	CHEM
NOBLE AFFILIATES INC.	OIL
NOLAND COMPANY	CONS
NORDSTROM INCORPORATED	RETL
NORFOLK SOUTHERN CORPORATION	TRAN
OAK INDUSTRIES INC.	TRON
OCCIDENTAL PETROLEUM CORPORATION	OIL
OCEAN DRILLING & EXPLORATION	OIL
OFFICE DEPOT INC.	RETL
OILGEAR COMPANY	MACH
OMEGA CORPORATION	TRON
OMI CORPORATION	TRAN
ORIOLE HOMES CORP.	CONS
ORYX ENERGY COMPANY	OIL
OSHMAN'S SPORTING GOODS INC.	RETL
OVERSEAS SHIPHOLDING GR.	TRAN
O'SULLIVAN CORPORATION	CHEM
PACCAR INC	AUTO
PAN AM CORPORATION	TRAN
PARK ELECTROCHEMICAL CORPORATION	TRON
PATRICK INDUSTRIES INCORPORATED	CONS
PATRICK PETROLEUM COMPANY	OIL
PAUL HARRIS STORES INC.	RETL
PENNEY (J.C.) COMPANY INC.	RETL
PENNZOIL COMPANY	OIL
PENN CENTRAL CORPORATION (THE)	TRON
PENN VIRGINIA CORPORATION	OIL
PEP BOYS--MANNY MOE & JACK (THE)	RETL

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.S. Firms

NAME	INDUSTRY
PETRIE STORES CORPORATION	RETL
PETROLEUM HEAT & POWER CO. INC.	OIL
PHILIP MORRIS COMPANIES INC.	FOOD
PHILLIPS PETROLEUM COMPANY	OIL
PHM CORP.	CONS
PIC'N'SAVE CORPORATION	RETL
PIER 1 IMPORTS INC.	RETL
PITNEY BOWES INC.	MACH
PLAINS PETROLEUM COMPANY	OIL
PLY-GEM INDUSTRIES INC.	CONS
POGO PRODUCING COMPANY	OIL
POLARIS INDUSTRIES PARTNERS L.P.	MACH
POLICY MANAGEMENT SYSTEMS	TRON
POPE & TALBOT INC.	CONS
PORTA SYSTEMS CORP.	TRON
PORTEC INC.	MACH
POTLATCH CORPORATION	PAPR
PRATT AND LAMBERT INC.	CHEM
PRESIDIO OIL COMPANY	OIL
PRESTON CORPORATION	TRAN
PROCTER & GAMBLE COMPANY (THE)	CHEM
PS GROUP INC.	RETL
PUERTO RICAN CEMENT COMPANY INC.	CONS
QUADREX CORPORATION	CONS
QUAKER CHEMICAL CORPORATION	CHEM
QUAKER OATS COMPANY (THE)	FOOD
QUAKER STATE CORP.	OIL
QUANTUM CHEMICAL CORPORATION	CHEM
RAGAN (BRAD) INC.	AUTO
RAYCHEM CORPORATION	CHEM
RAYMOND CORPORATION (THE)	MACH
RAYONIER TIMBERLANDS L.P.	CONS
RAYTECH CORPORATION	AUTO
RAYTHEON COMPANY	TRON
READING & BATES CORPORATION	OIL
REGAL INTERNATIONAL INC.	OIL
REPUBLIC AUTOMOTIVE PARTS INC.	RETL
REPUBLIC GYPSUM COMPANY	CONS

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.S. Firms

NAME	INDUSTRY
RETLLOTUS DEVELOPMENT CORPORATION	TRON
RISER FOODS INC.	RETL
RITE AID CORPORATION	RETL
ROBERTSON-CECO CORP.	CONS
ROHM & HAAS COMPANY	CHEM
ROPAK CORP.	CHEM
ROSE'S STORES INC. CLASS 'A'	RETL
RPC ENERGY SERVICES INC.	OIL
RPM INC.	CHEM
RYKOFF-SEXTON INC.	FOOD
RYLAND GROUP INC. (THE)	CONS
SAFEGUARD SCIENTIFICS INC.	TRON
SANTA FE PACIFIC CORPORATION	TRAN
SARA LEE CORPORATION	FOOD
SAVANNAH FOODS & INDUSTRIES INC.	FOOD
SAVIN CORPORATION	MACH
SCAN OPTICS INCORPORATED	TRON
SCHLUMBERGER LIMITED	OIL
SCHULMAN (A.) INC.	CHEM
SCHWITZER INC.	AUTO
SCOPE INDUSTRIES	FOOD
SCOTSMAN INDUSTRIES INC.	ELEC
SCOTT PAPER COMPANY	PAPR
SEABOARD CORPORATION	FOOD
SEALRIGHT CO. INC.	PAPR
SEARS ROEBUCK AND CO.	RETL
SEAWAY FOOD TOWN INC.	RETL
SEA CONTAINERS LTD.	TRAN
SENSORMATIC ELECTRONICS COMPANY	TRON
SHELD AHL INC.	TRON
SHERWIN-WILLIAMS COMPANY (THE)	CHEM
SIGMA-ALDRICH CORPORATION	CHEM
SIMPSON INDUSTRIES INC.	AUTO
SKYLINE CORPORATION	CONS
SL INDUSTRIES INC.	ELEC
SMITHFIELD FOODS INC.	FOOD
SMITH CORONA CORP.	MACH
SMITH INTERNATIONAL INC.	OIL

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.S. Firms

NAME	INDUSTRY
SMUCKER J.M. COMPANY (THE)	FOOD
SNAP-ON TOOLS CORPORATION	MACH
SONOCO PRODUCTS COMPANY	PAPR
SOUTHDOWN INCORPORATED	CONS
SOUTHWEST AIRLINES CO.	TRAN
SPX CORPORATION	AUTO
SQUARE D COMPANY	ELEC
STANDARD BRANDS PAINT COMPANY	RETL
STANDARD MOTOR PRODUCTS INC.	AUTO
STANDARD PACIFIC L.P.	CONS
STANDARD PRODUCTS COMPANY (THE)	AUTO
STARRETT HOUSING CORPORATION	CONS
STEEGO CORPORATION	AUTO
STEPAN COMPANY	CHEM
STOKELY USA INC.	FOOD
STONE CONTAINER CORPORATION	PAPR
STONE & WEBSTER INCORPORATED	CONS
STORAGE TECHNOLOGY CORPORATION	TRON
STRATUS COMPUTER INC.	TRON
STRAWBRIDGE & CLOTHIER	RETL
SUNDSTRAND CORPORATION	MACH
SUNSHINE JR. STORES INC.	RETL
SUNSHINE MINING COMPANY	OIL
SUN COMPANY INC.	OIL
SUN ELECTRIC CORPORATION	TRON
SUPERIOR INDUSTRIES INTERNATIONAL	AUTO
SYMBOL TECHNOLOGIES INC.	TRON
SYMS CORP.	RETL
SYNOPTICS COMMUNICATIONS INC.	TRON
TANDON CORPORATION	TRON
TANDY CORPORATION	RETL
TASTY BAKING COMPANY	FOOD
TBC CORPORATION	AUTO
TECH SYM CORPORATION	TRON
TECUMSEH PRODUCTS COMPANY	ELEC
TEKTRONIX INC.	TRON
TELLABS INC.	TRON
TEMPLE-INLAND INC.	PAPR

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.S. Firms

NAME	INDUSTRY
TENERA L.P.	TRON
TENNANT COMPANY	MACH
TEREX CORPORATION	CONS
TEXACO INC.	OIL
TEXAS INDUSTRIES INC.	CONS
THE HORN & HARDART COMPANY	RETL
THOMAS INDUSTRIES INC.	ELEC
THOMAS & BETTS CORPORATION	ELEC
THREE D DEPARTMENTS INC	RETL
TIDEWATER INC.	TRAN
TIFFANY & CO.	RETL
TIFFANY & CO.	RETL
TITAN CORPORATION	TRON
TJX COMPANIES INC.(THE)	RETL
TJ INTERNATIONAL INC.	CONS
TOOTSIE ROLL INDUSTRIES INC.	FOOD
TORO COMPANY (THE)	MACH
TOSCO CORPORATION	OIL
TOYS "R" US INC.	RETL
TRAK AUTO CORPORATION	RETL
TRANSCISCO INDUSTRIES INC.	TRAN
TRANS WORLD MUSIC CORP.	RETL
TRICO PRODUCTS CORPORATION	AUTO
TRITON ENERGY CORPORATION	OIL
TRW INC.	TRON
TUESDAY MORNING INC.	RETL
TURNER CORP.	CONS
TWIN DISC INCORPORATED	MACH
UAL CORPORATION	TRAN
UNION CAMP CORPORATION	PAPR
UNION CARBIDE CORPORATION	CHEM
UNION PACIFIC CORPORATION	TRAN
UNION TEXAS PETROLEUM HOLDINGS INC.	OIL
UNITED FOODS INC.	FOOD
UNITED INDUSTRIAL CORPORATION	TRON
UNITED STATES SHOE CORPORATION	RETL
UNIT CORPORATION	OIL
UNIVAR CORPORATION	CHEM

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.S. Firms

NAME	INDUSTRY
UNIVERSAL MEDICAL BUILDINGS L.P.	CONS
UNOCAL CORPORATION	OIL
UNOCAL EXPLORATION CORP.	OIL
USG CORPORATION	CONS
USX-MARATHON GROUP INC.	OIL
US AIR GROUP	TRAN
U.S. HOME CORPORATION	CONS
VALERO ENERGY CORP.	OIL
VARCO INTERNATIONAL INC.	OIL
VELOBIND INCORPORATED	PAPR
VENTURIAN CORPORATION	AUTO
VERSA TECHNOLOGIES INC.	CHEM
VISHAY INTERTECHNOLOGY INC.	TRON
VONS CO'S INC. (THE)	RETL
VOPLEX CORPORATION	AUTO
VULCAN MATERIALS COMPANY	CONS
WAINOCO OIL CORPORATION	OIL
WALBRO CORP.	AUTO
WALGREEN CO.	RETL
WAL-MART STORES INC.	RETL
WATKINS-JOHNSON COMPANY	TRON
WAUSAU PAPER MILLS COMPANY	PAPR
WAXMAN INDUSTRIES INC.	CONS
WEAN INC.	MACH
WEIS MARKETS INC.	RETL
WEITEK CORPORATION	TRON
WELLCO ENTERPRISES	RETL
WERNER ENTERPRISES INC.	TRAN
WESTERN COMPANY OF NORTH AMERICA	OIL
WESTINGHOUSE ELECTRIC CORPORATION	TRON
WESTMORELAND COAL COMPANY	OIL
WEYERHAEUSER COMPANY	CONS
WHIRLPOOL CORPORATION	ELEC
WHITEHALL CORPORATION	TRON
WHITMAN CORP.	FOOD
WILLAMETTE INDUSTRIES INC	PAPR
WILLIAMS-SONOMA INCORPORATED	RETL
WILSHIRE OIL COMPANY OF TEXAS	OIL

Appendix A Cont'd

Firms Studied Broken Down By Country and Industry

U.S. Firms

NAME	INDUSTRY
WINNEBAGO INDUSTRIES INC.	CONS
WINN-DIXIE STORES INCORPORATED	RETL
WISER OIL COMPANY (THE)	OIL
WITCO CORPORATION	CHEM
WOLOHAN LUMBER CO.	RETL
WOOLWORTH CORPORATION	RETL
WRIGLEY (WM) JR. COMPANY	FOOD
WYNN'S INTERNATIONAL INC.	AUTO
XEROX CORPORATION	MACH
YELLOW FREIGHT SYSTEM INC.	TRAN
ZURN INDUSTRIES INC.	MACH

Appendix B

**MANCOVA Results:
Differences Between Countries on the Relationship
Between Sales Growth (SALESG) and...
F-Statistics and their Significance**

Return on Assets (ROA)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	2.77 [*]			
GERMANY	5.65 ^{**}	8.25 ^{***}		
U.K.	6.86 ^{***}	6.55 ^{***}	0.11	
U.S.	0.44	6.61 ^{***}	20.90 ^{****}	21.06 ^{****}

Return on Invested Capital (ROIC)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	13.60 ^{****}			
GERMANY	1.84	1.63		
U.K.	0.10	8.29 ^{***}	2.46	
U.S.	0.20	19.97 ^{****}	6.88 ^{***}	0.07

Total Shareholder Return (TOTRET)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	0.04			
GERMANY	0.86	0.54		
U.K.	0.01	0.01	1.10	
U.S.	1.22	1.03	0.50	3.33 ^{**}

- country-pair significantly different at $p < .1$
- .. country-pair significantly different at $p < .05$
- ... country-pair significantly different at $p < .01$
- country-pair significantly different at $p < .001$

Appendix B Cont'd

**MANCOVA Results:
Differences Between Countries on the Relationship
Between Foreign Sales (FSALES) and...
F-Statistics and their Significance**

Return on Assets (ROA)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	15.62****			
GERMANY	0.79	14.09****		
U.K.	2.22	29.83****	0.01	
U.S.	4.02**	46.54****	0.35	0.04

Return on Invested Capital (ROIC)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	4.80**			
GERMANY	0.03	0.31		
U.K.	0.30	2.69*	0.01	
U.S.	0.18	2.13	0.01	0.02

Total Shareholder Return (TOTRET)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	0.18			
GERMANY	2.78*	1.35		
U.K.	0.26	0.15	1.23	
U.S.	5.71**	5.12**	1.37	2.11

- country-pair significantly different at $p < .1$
- country-pair significantly different at $p < .05$
- country-pair significantly different at $p < .01$
- country-pair significantly different at $p < .001$

Appendix B Cont'd

MANCOVA Results:
Differences Between Countries on the Relationship
Between Number of SIC Codes (NBIZ) and...
F-Statistics and their Significance

Return on Assets (ROA)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	1.76			
GERMANY	22.97****	10.55****		
U.K.	22.68****	21.51****	0.61	
U.S.	27.73****	54.50****	2.34	1.08

Return on Invested Capital (ROIC)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	3.33'			
GERMANY	12.83****	4.40**		
U.K.	16.94****	13.62****	0.21	
U.S.	14.68****	6.57**	0.19	2.61'

Total Shareholder Return (TOTRET)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	2.51			
GERMANY	1.90	0.03		
U.K.	1.80	0.16	0.02	
U.S.	0.26	1.16	0.83	1.11

- country-pair significantly different at $p < .1$
- country-pair significantly different at $p < .05$
- country-pair significantly different at $p < .01$
- country-pair significantly different at $p < .001$

Appendix B Cont'd

**MANCOVA Results:
Differences Between Countries on the Relationship
Between Weighted Diversification (WD) and...
F-Statistics and their Significance**

Return on Assets (ROA)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	2.27			
GERMANY	9.65***	0.81		
U.K.	10.14****	0.01	0.18	
U.S.	12.58****	0.33	2.90*	0.09

Return on Invested Capital (ROIC)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	3.26*			
GERMANY	6.87***	1.17		
U.K.	12.65****	8.54***	0.26	
U.S.	10.77****	3.32*	0.78	3.02*

Total Shareholder Return (TOTRET)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	3.13*			
GERMANY	0.43	0.13		
U.K.	2.78*	0.10	0.33	
U.S.	3.85**	0.17	1.89	0.18

- country-pair significantly different at $p < .1$
- country-pair significantly different at $p < .05$
- country-pair significantly different at $p < .01$
- country-pair significantly different at $p < .001$

Appendix B Cont'd

**MANCOVA Results:
Differences Between Countries on the Relationship
Between R&D Intensity (RD) and...
F-Statistics and their Significance**

Return on Assets (ROA)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	0.04			
GERMANY	7.43***	0.07		
U.K.	3.12*	0.37	0.38	
U.S.	16.17****	0.34	0.18	0.05

Return on Invested Capital (ROIC)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	1.53			
GERMANY	0.20	1.44		
U.K.	0.11	0.38	0.22	
U.S.	0.56	2.16	0.19	0.78

Total Shareholder Return (TOTRET)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	7.89***			
GERMANY	0.11	4.12**		
U.K.	2.92*	4.55**	0.68	
U.S.	0.68	15.89****	0.33	0.91

- * country-pair significantly different at $p < .1$
- ** country-pair significantly different at $p < .05$
- *** country-pair significantly different at $p < .01$
- **** country-pair significantly different at $p < .001$

Appendix B Cont'd

MANCOVA Results:
Differences Between Countries on the Relationship
Between Capital Expenditures (CAPFIX) and..
F-Statistics and their Significance

Return on Assets (ROA)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	0.51			
GERMANY	0.02	1.19		
U.K.	0.56	0.65	1.90	
U.S.	10.07**	1.56	15.79****	26.92****

Return on Invested Capital (ROIC)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	14.25****			
GERMANY	1.18	18.64****		
U.K.	4.09**	1.06	12.62****	
U.S.	7.55***	0.89	16.22****	0.28

Total Shareholder Return (TOTRET)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	2.28			
GERMANY	4.81**	0.39		
U.K.	1.92	7.82***	14.27****	
U.S.	0.53	0.58	6.98***	7.06***

- country-pair significantly different at $p < .1$
- ** country-pair significantly different at $p < .05$
- *** country-pair significantly different at $p < .01$
- **** country-pair significantly different at $p < .001$

Appendix B Cont'd

**MANCOVA Results:
Differences Between Countries on the Relationship
Between Payout Ratio (PAYOUT) and...
F-Statistics and their Significance**

Return on Assets (ROA)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	8.23***			
GERMANY	10.54****	26.00****		
U.K.	0.05	12.01****	15.53****	
U.S.	0.03	34.92****	16.67****	0.38

Return on Invested Capital (ROIC)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	0.06			
GERMANY	6.45***	7.70***		
U.K.	8.96***	5.41***	26.74****	
U.S.	0.05	0.25	18.37****	28.42****

Total Shareholder Return (TOTRET)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	1.55			
GERMANY	0.01	1.22		
U.K.	1.60	0.01	2.70'	
U.S.	0.01	3.43'	0.29	3.20'

- country-pair significantly different at $p < .1$
- country-pair significantly different at $p < .05$
- country-pair significantly different at $p < .01$
- country-pair significantly different at $p < .001$

Appendix B Cont'd

MANCOVA Results:
Differences Between Countries on the Relationship
Between Debt Ratio (DEBTR) and...
F-Statistics and their Significance

. **Return on Assets (ROA)**

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	5.89**			
GERMANY	4.41**	2.75*		
U.K.	0.45	9.58***	0.69	
U.S.	8.49***	0.16	5.55**	4.29**

Return on Invested Capital (ROIC)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	2.43			
GERMANY	2.47	1.22		
U.K.	5.74**	9.75***	4.57**	
U.S.	12.07****	5.58**	13.61****	22.35****

Total Shareholder Return (TOTRET)

	CANADA	FRANCE	GERMANY	U.K.
FRANCE	0.38			
GERMANY	0.47	0.01		
U.K.	0.24	0.11	0.41	
U.S.	0.17	3.97**	1.73	0.18

- country-pair significantly different at $p < .1$
- country-pair significantly different at $p < .05$
- country-pair significantly different at $p < .01$
- country-pair significantly different at $p < .001$