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Division Of Control, Relationship Dynamics And Joint Venture Performance

Louis Hebert

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ABSTRACT

The control exercised by parent firms over joint ventures (JVs) has been suggested to be a critical element for the effective management and the performance of these organizations. In this context, this study addressed the following questions: (1) How is control divided in JVs? (2) How does the division of control affect the performance and relationship dynamics of JVs? (3) Does the division of control affect international JVs (IJVs) differently compared to domestic JVs (DJVs)? To examine these questions, the study proposed a theoretical framework combining elements of transaction cost analysis and social exchange theory. A multi-method and multi-source methodology was used to investigate these questions in 2-parent, manufacturing JVs in operation in Canada. Hypotheses were tested using regression analysis, and both individual and aggregated self-report data.

The study found that the division of control, defined in terms of control sharing and autonomy, could be examined according to three groups of activities: operational, technological and strategic. In fact, the extent of control sharing and autonomy tended to vary significantly across these three dimensions. In addition, the study found that not all of these dimensions of control sharing and autonomy were similarly related with the performance and relationship dynamics of JVs. Specifically, control sharing and autonomy structures were more important determinants of performance in recently-formed

JVs, compared to older, more established ventures. Furthermore, analyses suggested that some dimensions of control sharing and autonomy affected the performance of IJVs differently compared to DJVs. In sum, the study provided evidence that the age and the international versus domestic nature of a JV mattered in the division of control-performance relationship. Yet, because of their limited explanatory power, control sharing and autonomy did not prove to be the important factors of performance and relationship dynamics suggested in the literature.

Finally, regarding the management of JVs, the study suggested that the division of control structure of a JV should be adapted to its age and international nature. It also emphasized the importance for managers to invest the time and effort required to support the development of mutual trust and to avoid conflict.

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TABLE OF CONTENT

| | |
|--|-----|
| Certificate of Examination | ii |
| Abstract | iii |
| Acknowledgements | v |
| Table of Contents | vii |
| List of Tables | x |
| List of Figures | xiv |
| List of Appendices | xv |
| | |
| CHAPTER 1: INTRODUCTION AND OUTLINE OF THE PROBLEM | 1 |
| 1. Scope of the study | 7 |
| 2. Organization of the study | 8 |
| | |
| CHAPTER 2: THE CONCEPTS OF CONTROL AND PERFORMANCE IN JOINT VENTURES: A LITERATURE REVIEW | 11 |
| 1. The concept of JV control | 11 |
| 2. The concept of JV performance | 23 |
| | |
| CHAPTER 3: THE CONTROL-PERFORMANCE RELATIONSHIP IN JOINT VENTURES: A LITERATURE REVIEW | 31 |
| 1. The control-JV performance relationship | 31 |
| 2. Trust, commitment, and conflict in JVs | 50 |
| 3. Focus and objectives of the study | 57 |
| | |
| CHAPTER 4: DIVISION OF CONTROL, RELATIONSHIP DYNAMICS AND PERFORMANCE: A RESEARCH MODEL | 61 |
| 1. Conceptual framework | 61 |
| 2. The research model | 67 |
| 3. Summary | 98 |

| | |
|--|------------|
| CHAPTER 5: RESEARCH METHODOLOGY | 100 |
| 1. General approach | 100 |
| 2. Unit of analysis and sampling frame | 106 |
| 3. Data collection | 109 |
| 4. Responses and non-respondents | 116 |
| 5. Operationalization and measurement of constructs | 119 |
| 6. Editing and analysis of data | 129 |
| | |
| CHAPTER 6: CONSTRUCT VALIDITY AND PRELIMINARY DATA ANALYSIS | 137 |
| 1. Reliability and validity of constructs | 137 |
| 2. Assessment of source convergence | 150 |
| 3. Assessment of the aggregation method | 152 |
| 4. Conclusion: Revision to the research model | 155 |
| | |
| CHAPTER 7: SAMPLE CHARACTERISTICS AND DESCRIPTIVE STATISTICS | 157 |
| 1. General characteristics of the sample | 157 |
| 2. Descriptive statistics | 162 |
| 3. Summary of sample JVs' characteristics | 176 |
| | |
| CHAPTER 8: CONTROL SHARING, RELATIONSHIP DYNAMICS, AND JV PERFORMANCE | 178 |
| 1. Relationship dynamics and JV performance | 178 |
| 2. Control sharing and JV performance | 188 |
| 3. Control sharing and relationship dynamics | 201 |
| 4. Discussion | 206 |
| | |
| CHAPTER 9: AUTONOMY, RELATIONSHIP DYNAMICS AND JV PERFORMANCE | 219 |
| 1. Autonomy and JV performance | 219 |
| 2. Autonomy and relationship dynamics | 228 |
| 3. Discussion | 229 |
| 4. Control sharing and autonomy | 235 |

| | |
|--|-----|
| CHAPTER 10: CONTROL, AUTONOMY AND PERFORMANCE: DOMESTIC VS. INTERNATIONAL JOINT VENTURES | 247 |
| 1. A comparison of DJVs and IJVs | 247 |
| 2. Control sharing, relationship dynamics and performance: IJVs vs. DJVs | 252 |
| 3. Autonomy, relationship dynamics and performance: IJVs vs. DJVs | 260 |
| 4. Control sharing and autonomy: IJVs vs. DJVs | 267 |
| CHAPTER 11: CONCLUSIONS, CONTRIBUTION AND LIMITATIONS OF THE STUDY | 270 |
| 1. Conclusions of the study | 270 |
| 2. Contributions of the study | 281 |
| 3. Implications for the management of JVs | 285 |
| 4. Limitations of the study | 294 |
| 5. Directions for future research | 298 |
| APPENDIX 1: QUESTIONNAIRE | 301 |
| APPENDIX 2: RESULTS FROM MODERATED REGRESSION ANALYSIS | 309 |
| BIBLIOGRAPHY | 319 |
| VITA | 342 |

LIST OF TABLES

| | | |
|-----|---|-----|
| 2-1 | Prior research: Dimensions of control | 15 |
| 2-2 | Prior research: JV performance variables | 25 |
| 3-1 | Selected studies on the division of control-JV performance relationship | 33 |
| 5-1 | Assessment of sub-samples and sample characteristics | 119 |
| 6-1 | Results from factor analysis: Individual data | 140 |
| 6-2 | Cronbach's alpha: Individual constructs | 142 |
| 6-3 | Pearson correlations: Individual constructs | 147 |
| 6-4 | Cronbach's alpha and Kolmogorov-Smirnov normality test: Mutual constructs | 149 |
| 6-5 | Comparison of aggregation methods | 154 |
| 7-1 | Importance of various objectives in parents' decisions to establish their JV | 158 |
| 7-2 | General characteristics of sample JVs | 160 |
| 7-3 | Descriptive results: Division of control constructs | 164 |
| 7-4 | Descriptive results: Autonomy constructs | 169 |
| 7-5 | Descriptive results: Relationship dynamics constructs | 171 |
| 7-6 | Descriptive results: JV performance constructs | 173 |
| 7-7 | Pearson correlations between subjective and objective measures of JV performance | 175 |
| 7-8 | Summary of sample JVs' characteristics | 177 |
| 8-1 | Relationship dynamics and JV performance: OLS standardized simple regression coefficients | 186 |

| | | |
|------|--|-----|
| 8-2 | Relationship dynamics and JV performance: OLS standardized multiple regression coefficients | 187 |
| 8-3 | Control sharing and JV performance: OLS standardized regression coefficients | 196 |
| 8-4 | Control sharing and individual performance items: OLS standardized regression coefficients; Individual assessments | 198 |
| 8-5 | Control sharing and individual performance items: OLS standardized regression coefficients, Mutual assessments | 200 |
| 8-6 | Control sharing and relationship dynamics: OLS standardized regression coefficients | 205 |
| 8-7 | Comparison of shared control and dominant control structures: Mutual assessments | 210 |
| 8-8 | Control sharing and JV performance: OLS standardized regression coefficients; JVs formed since 1980 | 214 |
| 8-9 | Control sharing and relationship dynamics: OLS standardized regression coefficients; JVs formed since 1980 | 215 |
| 8-10 | Comparison of shared control and dominant control structures: Mutual assessments; JVs formed since 1980 | 217 |
| 9-1 | Correlations between changes in autonomy and JV performance | 225 |
| 9-2 | Autonomy and JV performance: OLS standardized regression coefficients | 227 |
| 9-3 | Autonomy and relationship dynamics: OLS standardized regression coefficients | 230 |
| 9-4 | Autonomy and JV performance: OLS standardized regression coefficients; JVs formed since 1980 | 232 |

| | | |
|------|---|-----|
| 9-5 | Autonomy and relationship dynamics: OLS standardized regression coefficients; JVs formed since 1980 | 233 |
| 9-6 | Control sharing, autonomy and JV performance: OLS standardized regression coefficients; Individual assessments | 237 |
| 9-7 | Control sharing, autonomy and JV performance: OLS standardized regression coefficients; Mutual assessments | 238 |
| 9-8 | Control sharing, autonomy and relationship dynamics: OLS standardized regression coefficients | 239 |
| 9-9 | Control sharing, autonomy and JV performance: OLS standardized regression coefficients; Individual assessments; JVs formed since 1980 | 241 |
| 9-10 | Control sharing, autonomy and JV performance: OLS standardized regression coefficients; Mutual assessments; JVs formed since 1980 | 242 |
| 9-11 | Control sharing, autonomy and relationship dynamics: OLS standardized regression coefficients; JVs formed since 1980 | 243 |
| 10-1 | A comparison of Canada-based IJVs and DJVs | 248 |
| 10-2 | Importance of various objectives in parent firms' decision to establish DJVs and IJVs in Canada | 250 |
| 10-3 | Control sharing and JV performance in DJVs and IJVs: OLS standardized regression coefficients; Individual assessments | 256 |
| 10-4 | Control sharing and JV performance in DJVs and IJVs: OLS standardized regression coefficients; Mutual assessments | 257 |
| 10-5 | Autonomy and JV performance in DJVs and IJVs: OLS standardized regression coefficients; Individual assessments | 264 |

| | | |
|------|--|-----|
| 10-6 | Autonomy and JV performance in DJVs and IJVs: OLS standardized regression coefficients; Mutual assessments | 265 |
| 10-7 | Control sharing, autonomy and JV performance: A summary of relationships in DJVs and IJVs | 268 |
| 11-1 | Control sharing, autonomy and JV performance: Summary of significant relationships | 274 |
| 11-2 | Key characteristics of IJVs and DJVs | 287 |
| 11-3 | Control sharing and autonomy structures in IJVs and DJVs | 291 |

LIST OF FIGURES

| | | |
|-----|--|----|
| 3-1 | Gray and Yan's (1992) negotiations model of JV control | 41 |
| 3-2 | Prior research on the division of control-JV performance relationship | 49 |
| 4-1 | The division of control-JV performance relationship: A research model | 68 |
| 4-2 | The research model: Research hypotheses | 99 |

LIST OF APPENDICES

| | |
|---|-----|
| APPENDIX 1: QUESTIONNAIRE | 301 |
| APPENDIX 2: RESULTS FROM MODERATED REGRESSION ANALYSIS | 309 |

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CHAPTER 1

INTRODUCTION AND OUTLINE OF THE PROBLEM

With the current trend toward globalization and the increasing competitive and technological challenges of today's environment, joint ventures have become an important part of many firms' strategies. A joint venture (JV) involves two or more legally distinct organizations (the parents), each of which participates in the decision making activities of the jointly-owned entity. It is considered to be an international joint venture (IJV) when at least one of the parents is headquartered outside the venture's country of operations (Killing, 1983). In turn, it is considered to be a domestic JV (DJV) if both parents are headquartered in the same country as the venture.

Increasingly, JVs are viewed as critical components of an organization's business unit network (Porter and Fuller, 1986; Harrigan, 1987). They have become strategic weapons for competing within global and multidomestic arenas (Perlmutter and Heenan, 1986; Harrigan, 1988a). The frequency and number of JVs have also skyrocketed in recent years, a trend expected to continue in the current decade (Ouchi and Bolton, 1988; Deloitte, Haskins and Sells International, 1989; Anderson, 1990).

Technology, market and competitive considerations play a critical role in a firm's decision to become involved in JVs. For example, JVs may represent effective means of coping with the increasing costs and risks of technological development and innovation, by allowing firms to pool knowledge and resources in joint development and technology exchange activities (Hlavacek and Thompson, 1976; Porter and Fuller, 1986). They may enable a firm to monitor the worldwide evolution of markets and technologies, both inside and outside its industry, and to avoid early commitments to technologies, products, or markets that may later prove to be of minimal attractiveness and without sufficient commercial opportunities (Hamilton, 1985; Roberts and Mizouchi, 1989). JVs may be preferred alternatives when a firm cannot obtain or rely on its own resources, distribution networks, or economies of scale to compete and exploit its firm-specific advantage or its proprietary technology on a global scale (Rosenbloom and Cusumano, 1987; Ohmae, 1989). Furthermore, JVs may be formed for competitive purposes. For instance, firms' involvement in JVs can be motivated by the objective of strengthening their competitive position, as well as by the attractiveness of their industries. Through the formation of JVs, firms may promote the rationalization of their industry or simply block or reduce competition (Berg, Duncan and Friedman, 1982; Contractor and Lorange, 1988). JVs may also enable firms to take advantage of narrow and short-lived strategic windows (Harrigan, 1985; Kogut, 1988a).

Essentially, in addition to sharing and reducing the costs and risks of

some activities, firms may form these ventures to access and to transfer resources, assets, and competencies (Pfeffer and Nowak, 1976; Teece, 1988; Kogut, 1988b). In this matter, JVs, like other forms of strategic alliances, have been described as key mechanisms for learning or acquiring skills (Hamel, 1991; Inkpen, 1992).

Despite their benefits, JVs are not without drawbacks and shortcomings. Inherently, the presence of two or more parents represents a potentially significant source of complexity. Differences in national and/or organizational cultures, in strategic objectives, or in organizational structures, processes, and systems may result in considerable complexity as well as in conflict. These differences often make JVs difficult and laborious to manage (Janger, 1980; Killing, 1983; Geringer, 1986; Kogut, 1988a). Within this perspective, a critical determinant of the performance of a JV, and the extent to which the venture is able to satisfy the objectives of its parent companies, appears to be the control parent firms exercise over their venture's activities (Rafii, 1978; Killing, 1983; Schaan, 1983; Beamish, 1984). As used in this study, control refers to the process through which parents influence the behavior and output of JVs. In turn, the division of control can be defined as the allocation of control between parent firms.

The importance of control for the capacity of an organization to achieve its objectives has already been emphasized by several authors (e.g.,

Tannebaum, 1965; Lorange and Scott Morton, 1974; Baliga and Jaeger, 1984). Ineffective control can limit a firm's ability to coordinate its activities, to use its resources efficiently and to implement its strategy effectively (Stopford and Wells, 1972; Lorange, Scott Morton and Ghoshal, 1986). In JVs, control has also been recognized as playing a crucial role in ensuring that JVs are managed in ways consistent with their parent firms' interests and objectives (Schaan, 1983).

Yet, the exercise of control in JVs can prove to be both a critical and a complex task. In JVs, parent firms cannot typically rely solely on their raw bargaining power or their ownership position to effectively exercise this control. Furthermore, parent firms by definition agree to relinquish some control over their activities and technological resources. Such a move may limit a firm's ability to implement its strategy, to exploit its distinctive competencies, and to attain its objectives. In addition, by their inherent nature, JVs involve risks of dissemination of a parent firm's strategy, technological core, or other proprietary components to partners or other parties (Hill, Hwang, and Kim, 1990). Such dissemination, between the partners or to outside groups, may have serious effects on a parent's or JV's competitive position. It may create new or stronger competitors, or otherwise limit the JV's or the parent's efficiency (Rugman, 1985; Reich and Mankin, 1986). Thus, ineffective control may weaken the competitive and technological position of the firm, rather than strengthen it.

This discussion suggests that the control exercised by parent firms over

JVs and, by extension, how this control is divided among them, appears to be a critical element for the effective management and the performance of these organizations. Nevertheless, despite the importance of control, managers attempting to discern how control should be divided between parent firms will receive limited assistance from the literature. As we will demonstrate in Chapters 2 and 3, empirical evidence regarding the nature and strength of the relationship between division of control and JV performance is still limited. Results from previous research are most often conflicting or not significant. Prior research also exhibits extensive fragmentation, which limits the comparability and generalizability of results.

In addition to scant evidence and extensive fragmentation, prior research has been primarily limited to the study of the direct impact of control. Specifically, researchers previously examining the issue of JV control have not accounted for the impact of the division of control on the stability and dynamics of the relationship between parent firms, particularly on the development of trust, commitment, and the occurrence of conflict in JVs. Relationship dynamics variables such as trust, commitment, and conflict have been suggested to be of paramount importance for the viability and performance of JVs. For instance, often depicted as an intrinsic characteristic of JVs, inter-parent firm conflict has been identified as a major cause of failure and bad performance of JVs (Franko, 1971; Simiar, 1982; Killing, 1983; Habib, 1983; Beamish, 1984). In turn, Beamish and Banks (1987), and to some extent Buckley and Casson (1988), argued that

a foundation of mutual trust and commitment in a JV is likely to reduce conflicts and the risk of opportunistic behaviors that might reduce the benefits of the venture and harm its performance. In the presence of mutual trust and commitment, parent firms are also more likely to commit the resources required for the successful achievement of the JV's objectives (Beamish, 1988). Yet, the effect of the division of control on these relationship dynamics variables has not been empirically studied.

Furthermore, to our knowledge, no attempt has been made to compare DJVs and IJVs in prior research on division of control. While the unique dynamics of less-developed country (LDC) JVs compared to developed-country JVs was often discussed, the case of developed-country DJVs and IJVs was not. In fact, researchers were found to combine DJVs and IJVs in their analysis, while others focused on either type, most frequently on IJVs. As a result, little is known about the respective dynamics of IJVs and DJVs and whether the division of control has similar importance and effects in IJVs compared to DJVs. In other words, the moderating effect of the international versus domestic nature of a JV on the division of control-JV performance relationship remains to be studied.

It is within this context of scant evidence and extensive fragmentation, as well as of limited investigation of relationship dynamics variables and the moderating effect of the nature of a JV, that this research intends to study the relationship between the division of control and JV performance. Specifically, this

research addresses the following questions:

1. How is control divided in JVs?
2. How does the division of control affect the performance and relationship dynamics of JVs?
3. Does the division of control affect international JVs and domestic JVs differently?

Ultimately, it is expected that answering these questions will enable this research to provide managers with recommendations on how to exercise and divide control over JVs more effectively.

1. Scope of the study

This research studied two-parent JVs in manufacturing industries, in developed countries. In addition, only JVs where neither of the partners held more than 75 percent of the venture's equity were retained. When one of the parents held less than 25 percent of the equity, it was considered to be a minority equity investment rather than a genuine JV (Killing, 1988; Kogut, 1988b). By focusing on two-parent JVs, it was possible to control for the influence of the number of partners on the dynamics of ventures (Daniels, Ogram, and Radebaugh, 1983; Geringer, 1986). In fact, the risk of conflicts, coordination, and communication problems, as well as the complexity of decision making, tend to increase with parent multiplicity and may constitute serious

destabilizing forces for JVs (Killing, 1982; Zeira and Shenkar, 1990). Finally, in order to simplify its scope, the study was restricted to developed country JVs, and in particular, to JVs based in Canada.

2. Organization of the study

The remainder of the study is divided into ten chapters.

Chapter 2 presents a review of the literature on the concepts of control and performance of JVs as a basis for this study's theoretical framework. In particular, the review discusses the complexity and multidimensionality of these two concepts.

Chapter 3 presents a review of prior research on the JV control-performance relationship. This chapter also reviews previous work on trust, commitment, and conflict in JVs. The review highlights the potentially valuable contribution that arises from considering these constructs as key intervening variables in the division of the control-performance relationship. Chapter 3 concludes with a discussion of the research objectives and focus of the study.

Chapter 4 presents the conceptual framework and the research model of the study. The study's theoretical framework, which draws from both transaction cost analysis and social exchange theory approaches, is developed and

discussed. In addition, the constructs comprising the research model are presented. Research hypotheses are developed regarding (1) the relationships linking the division of control, defined in terms of control sharing and autonomy, with JV performance and relationship dynamics, and (2) the moderating effect of the international versus domestic nature of JVs on these relationships.

Chapter 5 outlines the research methodology used to test the hypotheses developed in Chapter 4. It describes the general approach used in this research, which involved a cross-sectional, multi-method, and multi-source design. The study's sampling frame and data collection procedures are presented. The measurement of the constructs — of control sharing, autonomy, trust, commitment, conflict, and performance — as well as the assessment of their reliability and validity are discussed. The chapter concludes with a discussion of the data analysis techniques that were employed in the study.

Chapter 6 reports results from analysis of construct validity. The reliability and validity of the study's constructs are discussed. This chapter concludes with an assessment of the respondents' perceptual consistency and the aggregation method used in the study.

Chapter 7 presents descriptive results. The principal characteristics of the study's sample are discussed. General descriptive statistics are provided for data collected on the variables of control sharing, autonomy, trust, commitment,

conflict and performance.

Chapter 8 examines and tests the hypotheses regarding the relationships linking control sharing with the performance and relationship dynamics of JVs. Results obtained for all sample JVs and those recently-formed are discussed.

Chapter 9 examines and tests hypotheses regarding the relationships linking autonomy with the performance and relationship dynamics of JVs. Again, results obtained for all sample JVs and those recently-formed are discussed. Furthermore, analyses combining control sharing and autonomy are conducted to assess the overall impact of these dimensions of division of control.

Chapter 10 compares and contrasts DJVs and IJVs. With the objective of testing the moderated effect of the international versus the domestic nature of JVs, different analyses examine whether control sharing and autonomy affect the performance and relationship dynamics of IJVs differently compared to DJVs.

Chapter 11 provides the study's conclusions and the theoretical and practical implications of the results. Potential contributions and limitations of the study are discussed. The chapter concludes with directions for further research.

CHAPTER 2
THE CONCEPTS OF CONTROL AND PERFORMANCE
IN JOINT VENTURES: A LITERATURE REVIEW

This chapter presents a review of the literature on the concepts of control and performance of JVs as a basis for the study's theoretical framework. In particular, this review will discuss the complexity and multidimensionality of these two concepts. It will show that prior research has relied on different conceptualizations and operationalizations of control and performance in JVs. It will also examine some implications of this diversity for the interpretation of previous studies and for future research efforts.

1. The concept of JV control

Control refers to the process by which one entity influences, to varying degrees, the behavior and output of another entity (Ouchi, 1977) through the use of a wide range of power-based, bureaucratic, cultural, and informal mechanisms (Etzioni, 1965; Baliga and Jaeger, 1984). Essentially, control plays an important role in the capacity of a firm to achieve its goals. As organizations expand in size and scope, there are concurrent increases in the complexity and differentiation

of their structures (Lawrence and Lorsch, 1967) as well as in the risks of domain conflicts and competing goals between units. As a result, top management is confronted by the increasingly crucial need to monitor, coordinate, and integrate the activities of the organization's business units, including JVs (Child, 1977; Mintzberg, 1979).

The importance of control in the capacity of an organization to achieve its goals explains why scholars have devoted attention to its role in the management of organizations (Etzioni, 1965; Tannebaum, 1968; Child, 1972; Ouchi and Maguire, 1975; Ouchi, 1978; Vancil, 1979). Several authors have investigated the exercise of control within large organizations, particularly multinational corporations (Skinner, 1968; Franko, 1971; Stopford and Wells, 1972; Brooke and Remmers, 1978; Bartlett and Ghoshal, 1989). In particular, they have examined the different degrees of control multinationals exercise over their subsidiaries (Cray, 1984; Anderson and Gatignon, 1986), as well as the mechanisms, systems, and procedures used, and the variables influencing the recourse to them (Doz and Prahalad, 1984; Baliga and Jaeger, 1984; Egelhoff, 1984; Doz, 1986; Bartlett and Ghoshal, 1989).

By comparison, since it was first raised by West (1959), the issue of how parent firms exercise control over their JVs has received relatively little attention. According to West, without effective control efforts, firms are likely to experience great difficulty in managing JVs. Despite this early observation, almost ten years

passed before the re-emergence of the issue of control in the JV literature. In fact, this issue has become increasingly popular in recent years, a situation that can be interpreted as the result of the growing number and increasingly strategic character of these organizational forms. In the past, JVs had most often been used to exploit peripheral markets or technologies, or typically involved activities of marginal importance to the parent firm's competitive position. However, JVs have increasingly been recognized as strategic weapons for competing within a firm's core markets and technologies (Porter and Fuller, 1986). Their number is also expanding rapidly, and more JVs and collaborative ventures have been announced since 1981 than in all the prior years before (Anderson, 1990). With this continuing trend of increasing strategic importance and frequency of JVs, the effective exercise of control over JVs, already described as a complex and critical management task, is likely to achieve even greater importance.

Efforts subsequent to West (1959) to study control in JVs have adopted very different perspectives. Particularly, prior research on the control of JVs has examined three different dimensions of control (Geringer and Hébert, 1989): the mechanisms, the extent, and the focus of control (See Table 2-1).

The mechanisms of control

The first dimension of JV control which researchers have examined is the mechanisms by which parents may exercise control. Initial studies on the

strategies and structures of multinational corporations (MNCs), such as Stopford and Wells (1972) and Franko (1971), associated control with ownership or a parent's percentage of a JV's equity. Like Tomlinson (1970), in his study of JVs in India and Pakistan, these initial studies suggested that firms frequently rely on majority ownership or equity control as the mechanism for achieving effective management control over a JV's activities.

Although these studies showed that a majority position in equity or voting rights could ensure some degree of control over a JV, the same argument might not be valid for JVs with equally divided equity or where a firm had only a minority position. In addressing such concerns, subsequent research noted that JV control was not a strict and automatic consequence of ownership. Different mechanisms were available to firms for exercising control over JVs. For instance, in their case studies of JVs in less developed countries (LDCs), Friedmann and Beguin (1971) affirmed that "there are a variety of factors that may divorce the degree of control and management exercised by the various partners from the size of equity holdings" (p.14). They concluded that firms could use rights of veto and special agreements between partners, such as licensing and management contracts, to exercise control. Companies might also be able to rely on their technical superiority and managerial skills as means of guaranteeing participation in the day-to-day operations of the venture.

In his study of US MNCs with operations in developed countries such as

TABLE 2-1
Prior research: Dimensions of control

| <u>Mechanisms of control</u> | <u>Extent of control</u> |
|------------------------------|--|
| Behrman (1970) | Division of control/decision making decentralization |
| Tomlinson (1970) | |
| Franko (1971) | |
| Friedmann and Beguin (1971) | |
| Stopford and Wells (1972) | |
| Gullander (1976) | |
| Rafii (1978) | |
| Schaan (1983) | Dang (1977) |
| | Killing (1982, 1983) |
| | Beamish (1984) |
| | Geringer (1986) |
| | Blumenthal (1988) |
| | Hill (1988) |
| | Tillman (1990) |
| | Gray and Yan (1992) |
| <u>Focus of control</u> | Division of equity |
| Schaan (1983) | Fagre and Wells (1982) |
| Lecraw (1984) | Lecraw (1984) |
| Geringer (1986) | Blodgett (1987, 1991) |
| Awadzi (1987) | Kogut (1988a) |
| | Woodcock and Geringer (1990) |

Canada, Europe, and Australia, Behrman (1970) suggested that control could be achieved through staffing, especially the JV's board of directors and key management positions of the JV. In addition to ownership as the fundamental mechanism of control, Gullander (1976) discussed the use of complex ownership structures and of control of the JV's raw materials as means of control. Rafii (1978) examined the impact of foreign control on the transfer of technology in 35 Iran-based JVs. He associated control with the nomination of one of the partners' managers as the JV general manager (JVGM). Nevertheless, Rafii admitted that

the JVGM was a limited and very imperfect measure of control and that other mechanisms existed.

In extending this stream of research, Schaan (1983) noted that these scholars generally did not explicitly recognize the existence of many mechanisms of control other than ownership or equity holdings. In addressing this issue in his study of ten JVs in Mexico, Schaan demonstrated the breadth of mechanisms available to parent firms. Among others, the JV's board of directors, formal agreements, the appointment of key personnel, the JV planning process, the reporting relationships, and a variety of informal mechanisms appeared to be especially important for Schaan's sample.

Schaan also made a significant contribution by dividing control mechanisms into two main types. Schaan distinguished positive control mechanisms, which parent firms employed in order to promote certain behaviors, from negative control mechanisms, which were used by a parent to stop or to prevent the JV from implementing certain activities or decisions. Positive control was most often exercised through informal mechanisms, staffing, participation in the planning process, and reporting relationships. In contrast, negative control relied principally on formal agreements, approval by parents, and the use of the JV's board of directors. These latter, negative forms of control exemplified what Child (1972) described as bureaucratic mechanisms.

The extent of control

Scholars also studied the extent or degree of control achieved by the parents over JV activities. Borrowing from organizational behavior research, a first group of studies conceptualized control as being dependent on the centralization or locus of the decision making process. The second group focused on the determinants of the sharing or division of control in JVs.

The first group of studies included Dang's (1977) research on the autonomy of US multinationals' subsidiaries in the Philippines and Taiwan. Dang defined control as the autonomy of a subsidiary and measured the construct with a decentralization index based on 17 key decisions. Nonparametric tests failed to reveal any differences in control based on ownership, or between complete or joint ownership. As a result, Dang concluded that the tendency and degree of multinationals' control over their subsidiaries could not be explained by equity ownership and, thus, that wholly-owned subsidiaries were not more tightly controlled than JVs. Nevertheless, he observed a more frequent presence of multinationals' expatriate managers in JVs. He suggested that the control exercised over JVs might be more important than indicated by his control index.

Using a similar perspective, Killing (1982, 1983) studied the division of control in a convenience sample of 37 JVs from developed countries. Building in part on the work of Tomlinson (1970), Killing employed interviews of parent

company executives and JV managers to examine parent firms' influence on nine types of decisions: pricing policy, product design, production scheduling, manufacturing process, quality control, replacements of managers, sales targets, costs budgeting and capital expenditures. More specifically, he inquired whether each decision was made (1) by the JV general manager alone, (2) by the local parent alone, (3) by the foreign partner alone, (4) by the JV general manager with input from the local parent, or (5) from the foreign parent, or (6) from both parents. Using this scale, Killing proposed a classification of JVs based on the extent and the symmetry of parents' control. He identified three distinct patterns of division of parent control over JVs. He distinguished dominant control JVs (where only one of the parents plays a dominant role in decision making), from shared management JVs (where each parent plays an active role in decisions) and independent JVs (where the alliance general manager enjoys extensive autonomy). Beamish (1984) subsequently employed the same scale and classification in an examination of 12 JVs in LDCs. He also made the distinction between dominant control exercised by the foreign parent or the local partner.

Several subsequent studies used approaches similar or related to Killing's. For instance, in studying JV partner selection in 90 US-based JVs, Geringer (1986) examined the degree to which control was expected to be shared by the two partners, rather than being allocated principally to one of the partners, at the time the partner was selected and the JV was being formed. This division of control was evaluated along nine dimensions somewhat similar to those used by

Killing (1982). In this approach, Geringer implicitly made a distinction between the division of control between parent firms, defined in terms of shared control, and autonomy, or the division of decision making responsibility between parents and the JV. A similar distinction was found in Hill (1988), Blumenthal (1988) and Tillman (1990) who asked parent firms to assess the extent of control exercised by the JV partner.

The determinants of the extent of control exercised by the parent firms and the extent to which control was divided between them were at the centre of the second stream of research. Essentially, within this perspective, the control exercised by each parent was perceived as the result of negotiation which reflected the partners' relative bargaining power. This point of view was initially developed in studies such as Fagre and Wells (1982), among others. From their study of US multinationals in Latin America, Fagre and Wells concluded that the ownership position obtained by these firms was related to their bargaining power. This bargaining power was interpreted as resulting from the type of resources they provided and the availability of these resources from other sources. Blodgett (1987, 1991) later suggested that bargaining power was determined by a firm's ability to protect its resource base in a JV in such a way that its partner could not acquire or absorb these resources. She also proposed that resources such as market access and technology would provide dominant bargaining power to a parent firm. Empirical testing using a sample of 69 IJVs showed that the parent firm with such resources typically obtained a majority equity position in a JV.

While these authors looked at the relationship between bargaining power and division of equity, some others also devoted attention to the extent of control exercised over a jointly-owned subsidiary. In particular, Lecraw (1984) expanded Fagre and Wells' (1982) work by examining the link between the bargaining power of multinational enterprises (MNEs) and their control of subsidiaries based in ASEAN countries. Lecraw focused on "effective control," a measure of the degree of control a MNE exercised over 18 decision areas weighted by their importance for the success of the venture from the MNE's standpoint. His results supported the notion that a MNE's bargaining power was correlated with its equity position, as well as with the extent of effective control exercised.

Furthermore, many have argued that the parent firms' respective bargaining power will also influence the division of control structure used in JVs (Hall, 1984; Harrigan, 1986; Awadzi, 1987; Harrigan and Newman, 1990). In particular, Gray and Yan's (1992) negotiations model of JV formation, structure, and performance emphasized the influence of bargaining power on the type of division of control structure in use in a JV.

The focus of control

Prior research reviewed so far assumed implicitly that parent firms seek to control the overall JV, rather than targeting specific activities or areas of a JV. However, as seen below, some authors also suggested that control could be

exercised over specific activities or areas. This stream of research has suggested that control also has a focus dimension. In particular, Schaan (1983) demonstrated that parents may choose to exercise control over specific "strategically important activities" rather than over the whole JV. Without being clearly identified, such activities were described as those that could affect the meeting of parents' criteria of success.

This contention was supported by Geringer (1986). He mentioned that although most JVs in his sample split equity on a 50/50 basis, "respondents noted that control over specific activities of the JV often was not expected to be shared as equally as ownership" (p.447). In particular, control over decision areas such as capital expenditures, hiring of JV managers, and the establishment of prices and sales targets tended to be more shared than for activities such as product design, manufacturing set-up, and day-to-day management of JVs. Similar conclusions were reached by Awadzi (1987).

These findings suggest the notion of parent firms' parsimonious and contingent usage of resources for controlling JVs. They also suggested the existence of a fourth category of JV control structure, a split control JV, where each parent's control is selective and exercised over specific dimensions of the venture rather than over the JV as a whole (Cantwell and Dunning, 1984; Beamish, 1988; Killing, 1988). However, little is known about the nature and different types of split control. No specific rules have been established either to

distinguish split control structures from other JV control structures. For example, in the absence of precise indications regarding split control structures, it can be difficult to determine whether a JV where one activity is dominated by one parent while all other decisions are shared, should be described as a shared control venture or as a split control one. Therefore, further research on the patterns of division of control over the different activities of JVs appears warranted.

Conclusions on the concept of control

This review has shown that JV control is a complex and multidimensional concept. In particular, control and its division between parents are more subtle and complex phenomena than a proxy like relative equity ownership is able to capture. The centralization of decision making perspective provides a more sophisticated and effective conceptual base for examining control and its division between parent firms. This perspective represents a significant advancement for the JV literature because of its conceptualization of control as a continuous variable, rather than merely an absolute, dichotomous variable representing parents' exercise of either total control or no control over the JV. This approach enabled Killing (1982) to propose a tripartite classification of division of control structures in place in JVs, a classification that was later extended with the addition of split control JVs. In addition, this conceptualization provides a basis for effectively exploring patterns of division of control over single and group of activities, and therefore to account for both the extent and the focus of control.

Nevertheless, using Killing's classification and the decision making centralization perspective, it appears also important to distinguish two complementary dimensions of the division of control. The first one is the division of control between the parent firms and the JV, or in other words, the autonomy of the venture. The second dimension is the division of control between the parent firms, defined in this study as the extent of control sharing between parent firms. These dimensions each represent a different type of division of decision making responsibilities, as suggested earlier.

2. The concept of JV performance

Scholars have devoted considerable attention to the performance of JVs. In particular, a review of the literature shows that the construct of JV performance has been conceptualized and operationalized in many different ways. No consensus on the appropriate definition and measurement of this construct has yet emerged.

For instance, a variety of objective measures for JV performance can be found in the literature on JVs as well as in the research on the control of JVs (See Table 2-2). These measures of performance range from financial indicators to the survival or liquidation of the venture, its duration, the instability (or changes) in its ownership, and the renegotiation of the IJV contract. However, particularly for non-financial measures, objective measures may be ineffective

in evaluating the business performance of a JV, or the extent to which it has achieved its objectives as a business organization. These non-financial measures fail to provide direct indications on such traditional performance elements as profitability, growth, or market share. In turn, financial indicators may also be of little usefulness because of their limited comparability across industry segments, industries, and countries. Furthermore, non-financial and financial objective indicators do not adequately reflect the extent a JV has achieved its objectives for both the short and the long term (Killing, 1983; Artisien and Buckley, 1995; Blodgett, 1987; Anderson, 1990). IJVs and DJVs may be formed for pursuing a variety of objectives, from technology transfer and joint research to economies of scale (Porter and Fuller, 1986; Contractor and Lorange, 1988). In this context, despite poor financial results, liquidation, or instability, a JV may have attained the objectives of its parents and thus be considered successful by one or all of the parents. A JV may also be viewed as unsuccessful despite good financial results or continued stability.

Because of such concerns, Killing (1982) relied on a parent firm management's perceptual assessment of the performance of the JV. Later, Schaan (1983), Beamish (1984), Hill (1988), and Geringer and Hébert (1991) used a similar single-item scale measuring the parent's satisfaction vis-a-vis the performance of the venture. These authors also collected data from each parent regarding their level of satisfaction. This multi-respondent approach allowed the measurement of the mutual satisfaction of the parent firms regarding the JV or

TABLE 2-2
Prior research: JV performance variables

| <u>Objective measures</u> | <u>Perceptual measures</u> |
|---|--|
| Financial indicators Tomlinson (1970) Good (1972) Dang (1977) Renforth (1974) Beamish (1984) | Management's assessment Killing (1982, 1983) Schaan (1983) Beamish (1984) Hill (1988) Geringer and Hébert (1991, 1992) |
| Survival Franko (1971) Raveed (1976) Killing (1982, 1983) Blodgett (1987) Kogut (1988a) Woodcock and Geringer (1990) Geringer and Hébert (1991) | Composite measures Awadzi (1987) Subieta (1991) |
| Duration Blodgett (1987) Harrigan (1988a) Geringer and Hébert (1991) Subieta (1991) | Multidimensional scales Blumenthal (1988) Hill (1988) Roos (1989) Tillman (1990) |
| Instability Franko (1971) Gomes-Casseres (1987) Beamish (1984, 1993) Geringer and Hébert (1991) | |

its performance. It also provided an opportunity to account for potential divergence among partner firms' evaluations of performance. In addition, use of multiple respondents helped to reduce biases attributable to the single-respondent/source perspective typically found in the literature (e.g., Tomlinson, 1970; Killing, 1982; Lecraw, 1984; Awadzi, 1987; Kogut, 1988a). It also provided

a basis for overcoming or at least controlling for many of the methodological shortcomings typical of perceptual measures.

Management's perceptual assessment of JV performance has many advantages over objective measures. Perceptual measures have the ability to incorporate the variety of goals pursued by parent firms. They also reduce the problem of lack of comparability across types of JVs, the motivations leading to their formation, or the industry in which they operate (Hill, 1988). They permit incorporation of qualitative and quantitative measure of performance, an especially important consideration for evaluating ventures in risky, uncertain, or little understood markets or technologies (Lynch, 1989; Anderson, 1990).

Still, as in other types of business organizations (e.g., Dess and Robinson, 1984), management's assessments or perceptual measures of JV performance have been found to correlate with objective measures (Beamish, 1984). In particular, Geringer and Hébert (1991) used a sample of 69 US-based IJVs to show that parent firms' perceptual assessments of performance and satisfaction were significantly correlated with objective measures such as JV survival and duration. The authors suggested that in the absence of other performance data, the use of objective measures — such as JV survival, and to some extent, JV duration — as performance variables could be justified. Despite significant results, JV stability had a much less direct relationship with subjective measures than JV survival and duration measures, and thus, a greater level of caution was

warranted regarding the use of stability as a JV performance measure.

There has been a trend in recent JV studies toward the use of composite measures of performance, possibly to address the limitations of both perceptual and objective measures of performance. Such measures combine objective and perceptual variables. For instance, Awadzi's (1987) composite measure of JV performance included financial indicators, a 13-item scale measuring the extent to which parents' expectations for the JV were met, and a 4-item scale measuring the JV's performance relative to other firms in its industry. Subieta (1991) combined JV duration with achievement of parent firms' objectives and parent firms' satisfaction. Some others have used multi-item scales and a combination of perceptual variables. In addressing the multidimensionality of JV success, Blumenthal (1988) relied on a parent firm's assessment of JV performance along nine dimensions and a measure of the parent firm's overall satisfaction. Hill (1988) combined similar variables and a perceptual assessment of financial performance. Tillman (1990) used similar indicators in addition to a multi-item scale for measuring parent firms' satisfaction. Finally, Roos (1989) used a perceptual multi-item scale assessing overall and financial performance as well as the quality of the relationship between the parent firms.

Conclusions on the concept of performance in JVs

The above discussion demonstrates that prior research has relied on very

different conceptualizations and operationalizations of JV performance. This situation may constitute a serious threat to the validity of many studies and may considerably limit the comparability of their results. Nevertheless, this discussion may provide some indications regarding the development of valid and reliable measurements of this variable.

As suggested by Schaan (1983) and Blumenthal (1988), among others, it appears critical to rely on parent-firm management's perceptual assessment to evaluate JV performance. Essentially, it is this assessment that influences a parent firm's decisions regarding a JV. This perceptual assessment may well depend on a single or on various objective measures of performance. Still, it is the management's assessment of such objective measures that will influence subsequent decisions or behaviors.

The development of adequate measures of the concept of JV performance also has to account for interdependent but different dimensions of performance. In fact, the performance of a JV can first be evaluated from the standpoint of the extent to which the JV has accomplished the objectives for which it was formed. It is an assessment of the business performance of the JV according to parents' expectations and objectives at the formation of the venture. This is the approach proposed by Killing (1982) and later used by a variety of researchers (See Table 2-2).

Second, JV performance can be assessed through the satisfaction of the parent firms. Satisfaction refers to a "positive affective state" (Anderson and Narus, 1984) resulting from the appraisal of one or many aspects of a JV. It is important to emphasize that satisfaction is not a direct assessment of the extent to which a JV has achieved its objectives, like the preceding variable. Although the achievement of the parents' objectives may be reflected in or correlated to their satisfaction (Beamish, 1984), satisfaction and business performance are two distinct dimensions of performance.

Furthermore, satisfaction can be expressed regarding either general or specific aspects of a JV (Beamish, 1984). Particularly, satisfaction can be exhibited in relation to the performance of the venture (Schaan, 1983; Beamish, 1984, 1987; Geringer and Hébert, 1991) or the performance of the JVGM (Geringer and Frayne, 1993). Satisfaction can also result from the appraisal of other aspects of a JV, for instance the relationship existing between the partner firms. In fact, the quality of the relationship existing between partner firms has been described as a key element of successful JVs (Killing, 1983; Beamish, 1984; Beamish and Banks, 1987). In turn, strained relationships, or conflicts, disagreements or antagonisms between the partners, can very easily lead a venture to its failure and termination. Therefore, it can be expected that the parent firms' respective satisfaction with the relationship between them will have a critical impact on the outcome of the JV. This satisfaction dimension may thus represent an important variable.

Finally, satisfaction can result from the simultaneous appraisal of all aspects of a JV. One could argue that, in the end, it is this overall satisfaction, or the satisfaction with the JV, that will have the most impact on the termination or continuity of a JV. This construct of overall satisfaction constitutes the focal consequence of models of inter-organizational relationships (e.g., Frazier, 1983; Anderson and Narus, 1984, 1990) and was the measure of JV success used in Blumenthal (1988) and Geringer and Hébert (1991).

CHAPTER 3
THE CONTROL-PERFORMANCE RELATIONSHIP IN JOINT VENTURES:
A LITERATURE REVIEW

This chapter reviews prior research on the control-performance relationship in JVs. This review suggests that the nature and strength of this relationship has yet to be established. It also shows that the impact of the division of control on the dynamics of the relationship between parent firms in JVs has received little attention. In this regard, the chapter highlights the importance and implications of the relationship dynamics constructs of trust, commitment, and conflict for JV performance. In addition, prior research's limited investigation of the respective dynamics of international and domestic JVs is addressed. The chapter concludes with a discussion of the focus and research objectives of the study.

1. The control-JV performance relationship

In addition to examining the exercise of control in JVs, scholars have also tried to enhance understanding of the relationship between parent control and performance of JVs. In this regard, Beamish (1984) suggested that the control

of JVs was "the most common variable discussed in conjunction with performance in the JV literature" (p.45). There are four groups of studies on the control-performance relationship: (a) early studies, whose primary focus was not necessarily the issue of control *per se*; (b) studies examining the relationship between the overall division of control and the performance of JVs; (c) studies focusing on the relationship between the division of equity and JV performance; and (d), studies examining the relationship between the exercise of control over specific activities and JV performance (See Table 3-1).

Early studies on control

Several early studies of JVs examined different aspects of the formation and management of the ventures, without focusing primarily on the exercise of control. For instance, Tomlinson (1970), often considered the first scholar to empirically study the control-performance relationship for JVs, did not directly examine parent control, but rather the "attitude of parents toward control." From a non-random sample of 71 IJVs in India and Pakistan, Tomlinson found that IJVs evidenced higher levels of profitability when their UK parents assumed a more relaxed attitude toward control. However, the validity of these results is questionable, since Tomlinson used return on investment as a measure of profitability. Such a measure for a multi-industry study is inadequate and may have produced unreliable results. Variations in the financial performance of IJVs could be caused, for example, by industry differences, rather than by differences

TABLE 3-1
Selected studies on the division of control-JV performance relationship

| | Authors | Type of JVs ¹ | Measure of Performance | Control-Performance Relationship |
|----------------------------------|---|------------------------------|---|--|
| Early Studies | Tomlinson (1970) Franko (1971) | LDC LJV LDC/DC LJV | Profitability Instability | Negative correlation Contingent on MNC parent's strategy |
| Overall Division of Control | Janger (1980) Killing 1982 | LDC/DC LJV DC LJV | Not provided Survival and perceptual measure | Supported as contingent Dominant control related to performance |
| | Hill (1988) Blumenthal (1988) | DC DJVs/LJVs DC DJVs/LJVs | Multidimensional scale Multidimensional scale | No relationship No relationship |
| | Tilman (1980) Geringer and Hebert (1982) | LDC LJV DC LJV | Multidimensional scale Perceptual measures of satisfaction and performance | Foreign partner control related to conflict and to low performance Shared control related to performance |
| Division of Equity | Lecraw (1984) Blodgett (1987) | LDC LJV DC LJV | Corrected success Duration, survival :negotiation of JV contract | Equal division related to low success Equal division related to duration and survival |
| | Kogut (1988) Woodcock and Geringer (1990) | DC DJVs/LJVs DC DJVs/LJVs | Duration Survival | No relationship Equal division related to survival |
| Control over Specific Activities | Schaan (1983) | LDC LJV | Perceptual measure of satisfaction | Contingent on fit among criteria of success, activities controlled and mechanisms |
| | Lecraw (1984) | LDC LJV | See above | Control over critical activities related to performance |
| | Awadzi (1987) Hill (1988) | DC DJVs/LJVs DC DJVs/LJVs | Composite measure Multidimensional scale | Dominant control over specific activities related to performance No relationship |

¹ LDC = Less developed country.
DC = Developed country.
DJV = Domestic joint venture.
LJV = International joint venture.

in the attitude toward control. Furthermore, as noted by Geringer (1986), Tomlinson's results may not be generalizable to developed country (DC) IJVs because of the study's focus on India- and Pakistan-based IJVs.

Although Franko (1971) also studied the control-performance relationship, his work, which was related to Stopford and Wells' (1972) research on multinational corporations (MNCs), focused on the parent (the MNC) and its strategy rather than on JVs and on their control. Using a sample of 169 US MNCs involved in more than 1100 developed and less developed country IJVs, Franko examined how parent control over JVs as well as JVs' stability varied according to the MNC parent's strategy. Franko's main argument was that different strategies had different organizational and control requirements, thereby influencing JV stability. Franko concluded that JVs were more stable when the MNC parent followed a product-diversification strategy (roughly equivalent to Doz's (1986) national responsiveness strategy), which usually demanded less control over subsidiaries. In contrast, JVs evidenced greater instability when the parent's strategy emphasized product concentration (roughly equivalent to Doz's (1986) global product strategy), which usually relied on centralization of decision making and strong control. Moreover, Franko demonstrated that JV stability tended to vary with the evolution of the MNC parent's organizational structure and strategy.

Nevertheless, Franko's results embody serious limitations. The author's

definition and measurement of the concept of control were never made clear. To evaluate control, the author relied on the importance given by MNC parent firms to standardization and to the centralization of decision making, particularly for marketing policy issues. Furthermore, as suggested by Geringer and Hébert (1991), the author's dependent variable, changes in JV ownership structure, may be a poor indicator of the JV's success, or of the achievement of the JV's objectives, and therefore of the performance of the JV. In addition, because ownership may also be a control mechanism, utilization of this construct may result in confusion regarding the meaning of ownership changes. It is open to conjecture whether the changes are indicative of modifications in the control of the JV, or of its performance. Despite these concerns, Franko made a significant contribution by examining the JV control-performance relationship within a "strategy-structure" framework. Within this perspective, parent control as well as performance is presumed to be contingent on the MNC's strategy and structure.

Studies examining overall division of control and JV performance

The second group included studies which examined the relationship between the overall division of control in JVs and JV performance. For many, Killing's (1982) pioneering study constitutes the starting point of this group of studies, which may be characterized as the "mainstream" of research on control and JV performance. Killing (1982, 1983) asserted that, among his three JV categories, dominant partner JVs were more likely to be successful than shared

management ventures. His argument was essentially as follows: since the presence of two (or more) parents constitutes the major source of management difficulties in JVs, dominant partner JVs, in which the venture's activities are dominated by a single parent, will be easier to manage and consequently more successful. To test his hypothesis, Killing measured performance via management's assessment of the JV's performance as well as evaluating the liquidation or reorganization of the JV as a sign of failure. With a convenience sample of 37 IJVs, the author found that both dominant partner and independent JVs tended to be more successful, on both measures, than shared management ventures. In the latter case, Killing suggested that the JVs' autonomy was more a result than a cause of their performance. However, no formal statistical tests were used to support the author's conclusions. Combined with the use of a non-random sample, this issue poses a serious threat to the validity and generalizability of Killing's results.

Beamish (1984) attempted to test Killing's hypothesis. Using Killing's (1982) data, he used a chi-square test to examine the relationship between division of control and JV performance, but found no significant relationship at the 0.05 level. Beamish subsequently utilized Killing's control and performance measures for a non-random sample of 12 JVs in less developed countries (LDCs). Unsatisfactory performance was found to be correlated ($p = 0.067$) with dominant foreign control, while dominant control by the LDC partner and shared control were judged unsatisfactory in only a few cases. Further analysis also

demonstrated that dominant foreign control was significantly associated with unsatisfactory performance in four decisions (production scheduling, production process, quality control, and replacement of managers), involving mainly production issues. Again, the non-random sample and the focus on LDC IJVs limit the generalizability of the study. Nevertheless, Beamish's approach is to be noted, since data was collected from both parent firms and the JVGM, in order to provide a richer picture of the dynamics of the JVs. He also made a distinction between dominant control by the foreign and by the local parent firm.

Although there have been few direct empirical tests, other studies have not tended to support empirically Killing's (1982) hypothesis that dominant control JVs outperform shared management JVs. For instance, using a classification schema similar to Killing's, with a sample of 168 DC and LDC JVs, Janger (1980) did not find that one type of control structure tended to be more successful than another. Hill (1988) studied a convenience sample of 31 US- and North Sea-based JVs in the oil industry. Dominant parent JVs were not found to exhibit higher performance. However, Hill did not formally measure the division of control between the parent firms, but rather the extent to which each partner was exercising influence over ten activities of the ventures. Hill also studied oil exploration and production JVs, which might evidence differences from the manufacturing JVs typically studied in the JV literature. In a similar manner, Blumenthal (1988) examined whether the actual control and the influence exercised by a parent firm over a JV's activities were related to

success and satisfaction with the venture. Using a random sample of US-based JVs, control was not found to be significantly associated with performance outcomes, while the influence hypothesis received only weak support. Nevertheless, Blumenthal noted that a parent firm's dissatisfaction was correlated with high levels of influence by its partner.

Blumenthal's (1988) results are echoed by Tillman's (1990) investigation of the influence of control and conflict on the performance of a random sample of 51 Japanese-Thai JVs. Although it did not use Killing's classification, Tillman's research showed that control did not have a direct significant impact on performance, but had a strong indirect effect through its influence on conflict. Specifically, extensive control by the Japanese partner resulted in high levels of conflict ($\beta = 0.48$; $p < .01$), which in turn had a negative impact on performance ($\beta = -0.40$; $p < .01$). The direct and negative impact of control by the Japanese parent was not significant ($\beta = -0.06$; $p < .66$). Although Tillman's results were obtained for LDC IJVs, the research is of interest for proposing conflict as an intervening variable between control and performance. Moreover, Blumenthal's (1988) and Tillman's (1990) results appear somewhat consistent with Beamish's (1984) study, in which dominant control by the foreign partner was found to result in unsatisfactory performance in LDC IJVs.

Geringer and Hébert (1992) attempted to test Killing's hypothesis in DC JVs, using a random sample of 76 US-based IJVs. Using elements of transaction

cost theory, they suggested that the stronger mutual hostage position enjoyed by shared control JVs compared to dominant control JVs would tend to stabilize the relationship and limit opportunism. This context would promote mutual trust and cooperation between the partners, as well as reduce risks of conflict. Thus, shared control JVs should exhibit better performance. In addition, because of the increasing strategic character of JVs, the authors proposed that close coordination with parent firms was required for these ventures to yield superior results. In other words, low autonomy JVs should outperform high autonomy JVs. The extent of shared control and autonomy were each measured with a nine-item scale used in Geringer (1986). Performance variables were perceptual and included satisfaction with the IJV performance and measures of overall performance, sales performance, and profitability achieved versus initial expectations. Using data collected from only one parent, *t*-tests showed that shared control JVs significantly outperformed dominant control IJVs for the three indicators of performance-versus-initial expectations. Low autonomy JVs also exhibited higher performance and satisfaction than high autonomy JVs. Although the results supported their rationale, the authors did not investigate whether shared control JVs did exhibit greater mutual trust or cooperation, as well as lower opportunism and conflict. Accordingly, their rationale remains to be tested.

Furthermore, with Geringer and Hébert (1992), Harrigan's (1988) conceptual framework is one of the few attempts at examining the relationship between the autonomy and the performance of JVs. In this framework, a JV's

need for autonomy was linked with different industry traits. Particularly, a JV's need for autonomy was described to be greater in industries with volatile competition, an embryonic structure or low exit barriers where rapid responses to change are required. It was also the situation for industries where human resources are key factors of competitive success. Nevertheless, Harrigan's propositions remain to be formally tested.

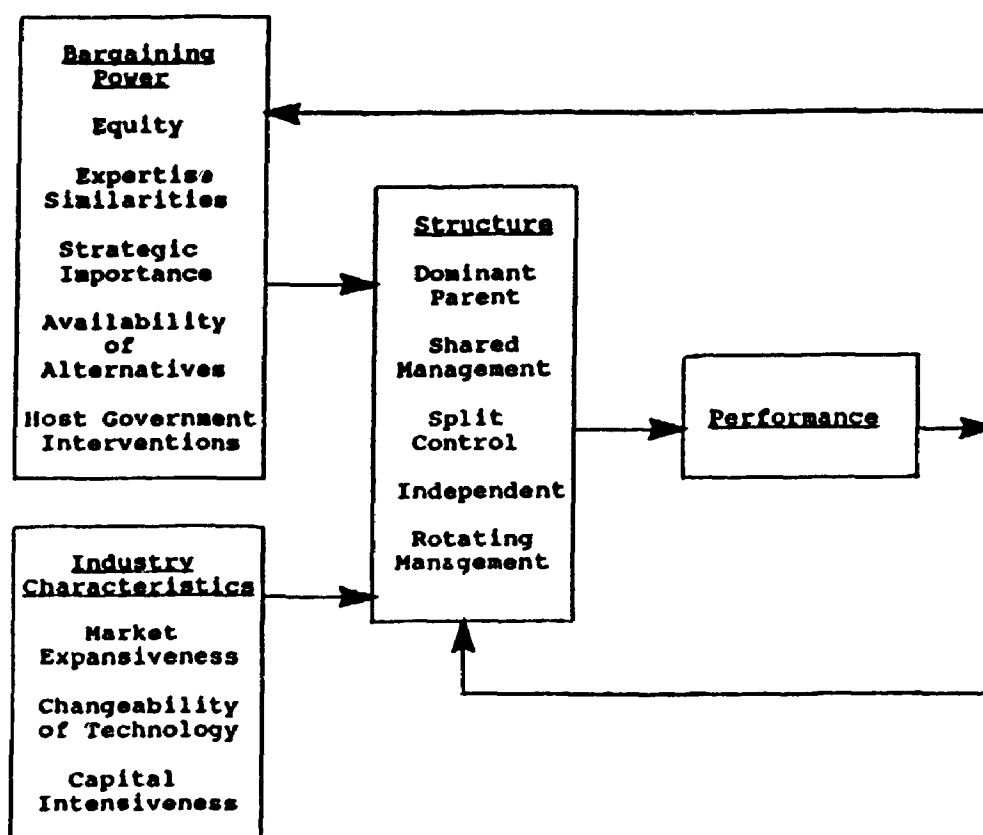
Gray and Yan (1992) recently proposed a negotiations model of JVs that represents an extension of Killing's perspective. In their model (See Figure 3-1), the division of control structure of a JV is determined mainly by the relative bargaining power of the parent firms. This structure is hypothesized as having a direct impact on the performance of the JVs.

Studies focusing on division of equity and JV performance

Most of the other studies on the control-performance relationship relied on a proxy, the relative ownership share of the parents, to measure management control exercised by the parents. Among others, Lecraw (1984) studied 153 wholly-owned and jointly-owned subsidiaries of MNCs located in Asian developing countries. His results showed that jointly-owned subsidiaries whose equity was divided approximately equally between MNCs and local firms exhibited lower levels of "country and industry-corrected success." This "corrected" measure of success was obtained by scaling the success rating of

a subsidiary on a 10-point Likert-type measure "in relation to the average success rating of the firms in the sample in the same industry in the same country" (p.37). Kogut (1988a) used ownership as a proxy for control to test Killing's hypothesis with a sample of 148 domestic and international US-based JVs. Kogut (1988a) did not find any significant relationship between dominant control and JV performance, measured by the time JVs were terminated.

FIGURE 3-1
Gray and Yan's (1992) negotiations model of JV control



In a study of 69 IJVs, Blodgett (1987, 1991) argued that equal bargaining power between partner firms of a JV would put pressure on both of them to make accommodations to the partnership. Equal bargaining power, reflected in the parent firms' respective equity holdings, would stabilize the venture and ensure its survival. Consistent with this view, Blodgett found that JVs with a relatively equal division of ownership had a significantly higher likelihood of achieving long life than JVs with an unequal division of equity between the parent firms. Median life of majority/minority JVs was 3.37 years, versus 6.94 years for equal or approximately equal ownership JVs (Blodgett, 1987; p.151). Blodgett's empirical results also showed that majority/minority JV contracts had a tendency to be renegotiated often. Furthermore, the cumulative proportion of equal ownership JVs surviving every year of their life was consistently higher than for majority-owned JVs. Blodgett concluded that the existence of majority equity holdings tended to be a destabilizing force in JVs.

Blodgett's results were supported by Woodcock and Geringer (1990). Using a sample of 2,503 international and domestic JVs based in Canada, they tested different hypotheses regarding the impact of the business and geographic diversification of JVs compared to parent firms, the cultural congruity of parent firms, and the division of JV equity on JV survival. Building from Blodgett (1987), these authors found that JVs in which ownership was divided equally had higher survival rates than JVs in which equity was unequally divided.

This group of studies on the division of equity-performance relationship provides a potentially valuable contribution to the literature on JV control. It may also raise important questions regarding Killing's hypotheses. Nevertheless, ownership remains an imperfect proxy for control, even though a strong correlation between ownership and control is assumed (Beamish, 1985). Similarly, although objective measures of performance such as survival, duration, and stability have been found to be strongly correlated with other measures of performance (Geringer and Hébert, 1991), they are also proxies. Consequently, more rigorous and direct empirical examination of the control-performance relationship is warranted, particularly with the use of perceptual measures of the division of control and JV performance.

Studies on control over specific activities and JV performance

The fourth group of studies examined control over specific aspects and areas of JVs and how this control was related to performance. In particular, Schaan (1983) concluded that venture success, or the extent to which parental expectations for the JV were met, was a function of the fit among three variables: the parent's criteria of success, the activities and decisions it controlled, and the control mechanisms that were utilized. Based on his convenience sample of ten IJVs in Mexico, the author suggested that JVs in which parents achieved this "fit" would evince better performance. Similarly, Lecraw (1984) found a positive relationship between the level of control MNCs

exercised over areas perceived as critical to the success of their wholly and jointly-owned subsidiaries and the performance of these subsidiaries from the MNCs' viewpoint. In turn, based on a sample of 40 US-based IJVs, Awadzi's (1987) results showed that the exercise of dominant control over specific JV activities by either one of the parent firms was related to performance.

Neither Awadzi (1987), Lecraw (1984) or Schaan (1983) provided detailed explanations for their results or conclusions. However, one can imagine that a parent firm not adequately exercising control over activities judged as critical for the achievement of its objectives, its competitive position, or for the protection of its interests, could ultimately suffer from ineffective strategy implementation. It would also not be surprising if this parent declared that its expectations with the JV were not met. In turn, Hill (1988) proposed a contingent relationship between the exercise of control over specific activities and performance. Hill (1988) suggested that the performance for specific dimensions of a JV's operations was associated with dominant control by the parent firm possessing a distinctive competence for these dimensions. He argued that this control appeared necessary to ensure the effective transfer of that distinctive competence to the JV. However, this hypothesis did not receive significant empirical support. This situation leaves us with very little understanding of the relationship between the exercise of control over specific activities and the performance of JVs.

Conclusions regarding the JV control-performance relationship

The preceding review essentially demonstrates that our understanding of the division of control-performance relationship in JVs is still limited. Empirical evidence regarding both control sharing and autonomy appears scant, and results are frequently conflicting or simply not significant. In particular, despite its common sensical character and conceptual appeal, Killing's hypothesis that JVs dominated by one partner exhibited superior performance appears to have received little empirical support. This situation could be interpreted as the result of two main factors, the fragmentation and the theoretical and methodological weaknesses of prior research.

First, prior research appears highly fragmented on the basis of the object of study, as well as on the basis of the conceptualization of control and performance outcomes (See Table 3-1). Specifically, scholars have focused either on a mix of domestic JVs and IJVs (Kogut, 1988a; Blumenthal, 1988; Hill, 1988; Woodcock and Geringer, 1990), on DC IJVs (Killing, 1983; Geringer, 1986, 1988; Awadzi, 1987; Blodgett, 1987; Kogut, 1988a; Geringer and Hébert, 1992), on LDC IJVs (Tomlinson, 1970; Schaan, 1983; Beamish, 1984; Lecraw, 1984; Tillman, 1990), or on both DC and LDC IJVs (Franko, 1971; Janger, 1980). As demonstrated by Beamish (1985) and supported by Austin (1990), LDC IJVs typically have purposes and dynamics quite different from those of DC IJVs. For instance, the motives underlying their formation have often been tactical in

nature, or limited to the desire to respond to foreign ownership legislation.

The fragmentation of prior research is also evident in the conceptualization and operationalization of the division of control and performance constructs. Indeed, prior research used two different constructs of control: locus of decision making/division of control structures, and division of equity. The situation is similar for the construct of performance, for which a variety of objective and perceptual measures have been used. Studies focusing on division of equity also tended to rely on objective measures of performance.

This fragmentation may explain the conflicting and not significant results found in the literature, as well as the limited support for Killing's hypothesis. It limits the comparability of many studies and the generalizability of their results. Subsequent attempts to study the division of control and its impact on performance will require more integrated and comparable approaches.

Second, prior research on the division of control-performance relationship exhibits both theoretical and methodological weaknesses. Prior research lacks theoretical foundations — at least, few researchers have relied on explicit and well-established theoretical frameworks. Some attempts have been made to examine the issue of control within the context of the strategy-structure approach (e.g., Franko, 1972) and resource dependence-bargaining power theory (e.g., Blodgett, 1987). Consistent with Beamish and Banks (1987), Geringer and

Hébert (1989, 1992) have also relied on elements of transaction cost theory. However, these theoretically-grounded attempts remain limited in number and scope. As a result, the development of advanced and refined theoretical frameworks appears to be imperative for enhancing understanding of, and promoting further research on, the division of control-performance relationship.

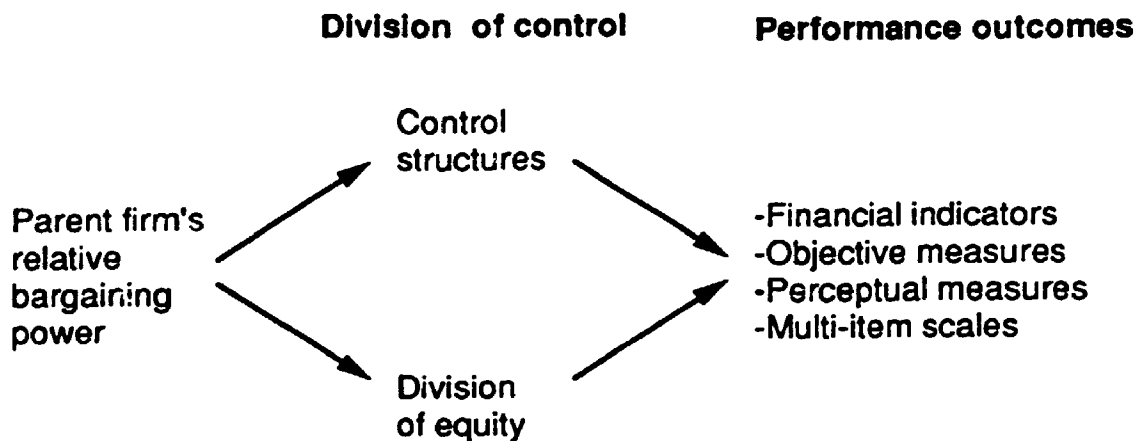
Regarding research methods, many prior studies have relied on "fine-grained" approaches and rather small convenience samples. These methodologies may provide a rich picture of the complexities and nuances associated with the control of JVs. Nevertheless, they typically involve shortcomings in hypothesis generation and replicability. They also lack generalizability and statistical rigor (Harrigan, 1983). Further research will need to rely on research methodologies emphasizing these characteristics, particularly generalizability and statistical rigor.

In conclusion, the nature and strength of the division of control-performance relationship has yet to be established and tested. In trying to achieve this task, it appears critical to consider that researchers have limited themselves to the study of the direct impact of the division of control, either in terms of control structure or equity, on JV performance (See Figure 3-2). This aspect is evident even in recent studies, such as Gray and Yan's (1992) negotiations model of JVs. Prior research did not account for the impact of the division of control on the dynamics and stability of the relationship between

parent firms, and particularly on the development of trust, commitment and the occurrence of conflicts in JVs. Several studies suggested that the quality and dynamics of the relationship between partner firms may have considerable impact on the performance and effectiveness of inter-organizational exchange relationships, including JVs (Blau, 1964; Golembiewski and McConkie, 1975; Beamish, 1984, 1988; Geringer, 1986; Anderson and Weitz, 1989; Ohmae, 1989; Tillman, 1990; Smith, 1992).

In the case of JVs, Beamish and Banks (1987), and to some extent Buckley and Casson (1988), highlighted the importance of trust and commitment for the effectiveness and performance of JVs. According to them, attempts by firms to take advantage of their partners and to engage in other types of opportunistic behaviors as well as the resulting inter-partner conflicts, constitute the most significant obstacles to effective cooperation. Within this perspective, Beamish and Banks (1987) suggested that a foundation of mutual trust and commitment between JV partners was likely to reduce the risks and costs of opportunism and conflicts that may reduce the mutual benefits of JVs and harm their performance. Several researchers have also stressed the role of trust and commitment for JV success (Peterson and Shimada, 1978; Beamish, 1984, 1988; Geringer, 1986; Harrigan, 1986). Others have described inter-partner conflicts as one of the major causes of failure and bad performance of JVs (Franko, 1971; Simiar, 1982; Killing, 1983; Habib, 1983; Beamish, 1984, 1988).

FIGURE 3-2
Prior research on the division of control-JV performance relationship



Nevertheless, despite the importance of trust, commitment, and conflict for JV performance, prior research on the issue of control has devoted little attention to these variables. In particular, the relationship between the division of control and these variables has never been studied. As a first step in that direction, and in an attempt to understand better the potential impact of the division of control on these variables, prior research on trust, commitment, and conflict in JVs will be reviewed in the following section.

2. Trust, commitment, and conflict in JVs

Few studies have directly investigated the role of relationship dynamics variables such as trust, commitment, and conflict in JVs. Nevertheless, as will be shown below, there is evidence supporting the importance of these variables for JV performance. There is also some evidence suggesting that these variables have a mediating role in the division of control-performance relationship.

The importance of trust and commitment

Trust and commitment have been suggested in general terms as a major condition for JV success (Bivens and Lowell, 1966; Ballon, 1967; Peterson and Schwind, 1977). The importance of trust has been particularly stressed in the context of Japanese-American JVs. For instance, Matsumoto (1972), explained his company's JV success with an American company in these terms: "I now believe 'mutual confidence' is the only immovable foundation in doing a fine joint-venture business" (p.35). Similarly, Peterson and Shimada (1978) highlighted the importance Japanese managers gave to trust in the selection of a partner, as well as in the formation and management of the ventures. Mutual trust enables partners to work out difficulties and conflicts, and minimizes the need for writing complex agreements and contracts that can cover all contingencies. It often makes unnecessary the renegotiation of agreements or the use of arbitration for resolving conflicts. Harrigan (1986) also stressed this dimension of JVs to

underline the importance of trust. Since JV agreements cannot ensure total and complete protection of the partners' interests, the success of a JV appears to depend, to some extent, on trust.

Early research investigated some of the factors and consequences of the presence of trust, commitment and conflict in JVs. Particularly, Sullivan, Peterson, Kameda and Shimada (1981) investigated the impact of conflict resolution approaches on trust in Japanese-American JVs. According to them, while conflicts were generally assumed to harm trust, their resolution by conferral rather than binding arbitration supported trust building. Results from further research by Sullivan and Peterson (1982) indicated, as hypothesized, that Japanese managers perceived greater future trust in a JV when a Japanese general manager was in charge of the venture, when interpersonal relationships among parent firm managers were good, when the JV was profitable, and when the Japanese partner enjoyed a dominant power position and controlled the JV by initiating major decisions. These findings essentially suggest that the partner having a dominant control and power position, and in this case the local partner, tends to exhibit high levels of trust. Unfortunately, data were not collected from American managers to see whether these perceptions were shared. Furthermore, these authors, as well as Sullivan et al. (1981), studied hypothetical rather than operating JVs. Data were collected from a random sample of Japanese managers who did not necessarily have JV experience, and who read a three-page scenario describing an hypothetical JV. Despite these studies'

limitations, findings suggest that a partner's control and power position may have an impact on trust.

Tomlinson and Thompson (1977) argued that commitment of the MNC parent to a JV was an important determinant of success. In their study of 11 Mexico-based IJVs, they defined commitment as whether the MNC perceived that the JV was a significant part of its global operations. Tomlinson and Willie (1978) also included two commitment variables, commitment of the foreign and local partner, in their model of the JV process in Latin America. Nevertheless, neither of these studies actually tested the association between commitment and JV performance.

Simiar (1982) studied the causes of failures, problems and mistrust in 29 Iran-based IJVs. He attributed mistrust to conflicts resulting from cultural differences and lack of goal congruence between the partners. In making recommendations addressing the causes of these conflicts, the author pinpointed the desire of either partner to exercise dominant control over the JV as one of the main examples of goal incongruence and as a major source of conflict. He argued for some control sharing between local and foreign partners in order to reduce risks of conflict.

Beamish and Banks (1987) as well as Buckley and Casson (1988) used transaction cost theory to understand the importance of trust, commitment, and

conflict in JVs. As stated earlier, Beamish and Banks (1987) suggested that a foundation of mutual trust and commitment between JV partners is likely to reduce the risks and costs of opportunism and conflicts that may reduce the mutual benefits of JVs and harm their performance. In such an organizational context, parent firms are likely to take a longer term perspective regarding their involvement in a JV and the continuation of the cooperative relationship, rather than merely focusing on obtaining short-term advantages at the expense of their partner and the JV. As a result, benefits would be maximized while overall and governance costs would be minimized. Similarly, Buckley and Casson (1988) argued that the presence of mutual trust reduced the transaction costs of cooperative ventures. Commitment was asserted to support the development of inter-partner cooperation, and thus to increase their mutual benefit from the venture. Geringer and Hébert (1992) used a similar rationale to suggest that shared control JVs, where the strong mutual hostage position promotes mutual forbearance and trust, would exhibit better performance.

Following these theoretical developments, some scholars devoted attention to the relationship among trust, commitment and performance. For instance, Beamish (1984, 1988) examined commitment, or the willingness of a parent to provide the effort required to make the venture work, in 12 LDC JVs. Beamish explained that his focus on this construct resulted from interviews where the absence of commitment was consistently identified as the cause of most problems in LDC IJVs. He defined commitment of the MNE parent on four

dimensions: commitment toward international business, the JV structure, the particular venture, and the particular partner in the JV. As hypothesized, JVs where the MNE partner exhibited commitment achieved significantly higher performance ($t = 2.66$; $p < .05$).

Inkpen (1992) studied learning in a sample of 31 Japanese-American JVs in the auto parts industry. His results showed that trust was correlated with openness in the relationship and learning outcomes. Complementary analyses also showed a strong significant correlation between trust and performance ($r = 0.67$; $p < .001$). These constructs were estimated with data collected from the ventures' general managers and not from the respective parent firms.

Some studies looked at the role of trust and commitment in the formation of JVs. For instance, Geringer (1986) concluded that "trust and commitment seemed to have been critical considerations in the selection of a partner" (p.482). Participants in the study explained that without trust and commitment, JVs tended to be short-term affairs. As a result, firms, and especially those with greater JV experience, were giving considerable importance to the selection of partners who exhibited commitment and trustworthiness.

Roos (1989) and Lorange and Roos (1990) examined the cooperative venture formation process in 67 Swedish and Norwegian firms. They specifically studied the impact of creating an "internal push" within an organization on the

performance outcome of the process. Internal push referred to the internal consensus and commitment from managers to pursue a cooperative venture. Performance was defined in terms of differences between planned and present results and of the quality of the relationship between partner firm managers. An internal push was found to have a significant positive effect on the performance of the cooperative venture formation process for the overall sample and for the Norwegian sub-sample. These results tend to support the commitment-performance relationship as identified in Beamish (1988).

Building from cooperation, exchange and transaction cost theories, Subieta (1991) identified trust and commitment as key constructs in the effective formation of cooperative arrangements, along with motivation, power, and risk. Using a sample of 19 licensing agreements and 8 US-based JVs, trust and commitment were found to be major determinants of effectiveness, measured by the satisfaction of the parents and the achievement of their objectives. However, in contrast to the hypothesis developed from the negotiation literature, balance of power between the partners was not found to result in greater effectiveness.

The inherent presence of conflict

Because of the presence of at least two parent firms with organizational and cultural differences as well as the jointly-owned nature of JVs, inter-partner conflict has often been described as an inherent characteristic of JVs (Habib,

1983; Killing, 1983; Devlin and Bleackley, 1988; Parkhe, 1992). It has also been suggested as one of the major causes of the failure and bad performance of JVs (Killing, 1983; Reynolds, 1984; Harrigan, 1985). However, again, there has been little empirical investigation of conflict, its causes, and its consequences in JVs.

Using a sample of 258 IJVs, Habib (1983, 1987) proposed an approach to measure manifest conflicts in IJVs. In addition to assessing the reliability and validity of his measurement approach, Habib also confirmed empirically the long-held belief that disparity in the parent firms' goals was a major source of conflict. Analyses also showed that the frequency and intensity of conflict between partners were negatively correlated with satisfaction with the partner and the JV, and positively correlated with the number of changes partners would want to make in the JV, and the level of perceived conflict.

Tillman's (1990) research on control and conflict in Japanese-Thai JVs, reviewed earlier, supported these findings. Indeed, conflict was found to have a significant negative impact on performance. Tillman's results also indicated that control by the Japanese partner increased conflict, which in turn had a negative impact on performance, while control did not evince a significant direct impact on JV performance. These results thereby suggested that conflict had an important intervening role in the division of control-performance relationship.

Conclusions on trust, commitment, and conflict in JVs

The limited research on trust, commitment, and conflict in JVs exhibits some of the characteristics of the division of control-performance literature — in particular, limited empirical evidence, fragmentation, and methodological and theoretical limitations. Nevertheless, this review suggested that commitment, trust, and conflict were important variables in the relationship dynamics of JVs. They also had significant impacts on the performance of these organizations. As one would intuitively expect, these impacts tended to be positive in the case of trust and commitment, and negative in the case of conflict. Some support was also found for an impact of the division of control on the relationship between JV partners, and specifically on the development of trust and conflict. Despite these contributions from prior research, the impact of the division of control on these inter-partner relationship dynamics variables remains poorly understood.

3. Focus and objectives of the study

The preceding review described the main concepts and relationships examined in prior research on the division of control-performance relationship in JVs, as well as the contributions and limitations of major previous studies. The main conclusion one can draw from the preceding review is that the nature and strength of the division of control-performance relationship has not yet been established. Particularly, the relationship linking control sharing and autonomy

with JV performance remains to be tested.

Furthermore, the model presented in Figure 3-2 underlines the tendency for prior research to limit its investigation to the direct impact of the division of control and the division of equity on JV performance. As discussed earlier, previous studies did not devote attention to the relationship between the division of control and the relationship dynamics of JVs. Specifically, the relationship between the division of control and the development of trust and commitment, as well as with the occurrence of conflict, remains to be studied.

In addition to exhibiting extensive fragmentation, prior research on the division of control has not yet investigated the respective dynamics of IJVs and DJVs. While the distinct nature of LDC and DC JVs has been recognized, it is not the case of developed-country DJVs and IJVs. In fact, researchers were found to combine DJVs and IJVs in their analysis, while others focused on either type, most frequently on IJVs. Therefore, little is known on the moderating effect of the international versus domestic nature of a JV on the division of control-JV performance relationship, or in other words, whether the division of control affect differently IJVs compared to DJVs.

Finally, most scholars examining JVs have until now limited themselves to single-parent or single-source data collection approaches. This approach may appear adequate for the study of "hard" and objective constructs such as division

of equity and JV survival. However, it may be inappropriate for "soft" and subjective constructs such as trust, commitment, or satisfaction. Beamish (1984) argued for the necessity of examining both parent firms' perspectives in order to achieve a better understanding of a JV's dynamics and account for potential divergences between partner firms. Recent evidence of similarities and differences in perception among members of a JV (Geringer and Hébert, 1991) and inter-organizational relationships (John and Reve, 1982; Anderson and Narus, 1990; Smith, 1992) also supports the use of multiple sources, or of key informants from more than one parent firm.

Within this context, this research aims to provide answers to the following research questions:

1. How is control divided between parent firms?
2. How does the division of control affect the performance and relationship dynamics of JVs?
3. Does the division of control affect international JVs and domestic JVs differently?

To answer these questions, this study pursues the following objectives:

- 1) This research will examine the different patterns of division of control over JVs.

- 2) This research will examine the relationships linking these patterns of division of control with the performance and inter-partner relationship dynamics of JVs.
- 3) This research will examine the moderated effect of the international versus domestic nature of JVs on the relationships linking the division of control with the performance and inter-partner relationship dynamics.
- 4) This research proposes to develop an enhanced theoretical framework combining elements of transaction cost analysis and social exchange theory and to apply it to the study of the division of control-performance relationship.
- 5) This research will use a hybrid and multi-source methodology which addresses methodological limitations identified in prior research.
- 6) This research will attempt to provide managers with recommendations on how better to understand and enhance JV performance, particularly through a more effective division of control over JVs.

CHAPTER 4
DIVISION OF CONTROL, RELATIONSHIP DYNAMICS AND
PERFORMANCE: A RESEARCH MODEL

The preceding chapter presented a review of prior JV literature, highlighting key results and relationships as well as contributions and limitations of research on the division of control-performance relationship. Building from this review, this chapter presents the conceptual framework and the research model used in this study. The constructs of division of control, JV performance, and relationship dynamics which make up this model will be discussed. Furthermore, research hypotheses regarding the relationships linking the division of control with the performance and relationship dynamics of JVs will be formulated.

1. Conceptual framework

This section presents this study's conceptual framework. For this purpose, the conceptualization of JV is discussed. In addition, transaction cost analysis and social exchange theory are compared and contrasted in order to provide a theoretical framework.

The conceptualization of JV

In this research, JVs are conceptualized as a type of inter-organizational exchange relationship (Whetten, 1987). Building from the works of Homans (1961), Levine and White (1961), Aiken and Hage (1968), and others, JVs are essentially conceptualized as dynamic sets of transactions and interactions between two firms. These firms form a JV as a rational response to a deficiency vis-a-vis resources necessary to achieve their strategic objectives. Through the JV, the parent firms attempt to acquire resources, competencies, and assets they lack in order to pursue strategic opportunities effectively.

This perspective is consistent with recent research on JVs, especially those studies focusing on inter-partner learning in JVs (e.g., Hamel, 1991; Inkpen, 1992). Hamel (1991) described JVs as an "on-going process of collaborative exchange" (p.100) and as "a series of micro-bargains" (p.101). It is also important to consider that firms essentially aim to maintain their autonomy (Gouldner, 1959). They will remain involved in relationships such as JVs if the costs and the loss of independence associated with them are outweighed by the anticipated benefits (March and Simon, 1958; Thompson, 1967; Aiken and Hage, 1968; Beamish and Banks, 1987). Otherwise, the firms may choose to transact and to interact with alternative partners or through other forms of exchange relationships.

Transaction costs analysis and social exchange theory

Consistent with this approach to JVs, the study's theoretical framework draws from social exchange theory (SET) and transaction costs analysis (TCA). TCA (Williamson, 1975, 1981, 1985) has been extensively used to examine the formation, dynamics and structure of JVs in domestic and international contexts (Beamish and Banks, 1987; Harrigan, 1988b; Hennart, 1988; Kogut, 1988b; Osborn and Baughn, 1990; Chi, 1990). The central aim of this framework is to identify the source of transaction costs and to specify the governance structure that most efficiently mediates transactions, in order to minimize these costs. Governance mechanisms include both governance forms, i.e., markets and hierarchies, as well as these forms' internal arrangements (Ouchi, 1980; Monteverde and Teece, 1982; Jones, 1987; Anderson and Gatignon, 1986).

In turn, SET has its origins in the works of Thibaut and Kelley (1959), Homans (1961), and Blau (1964), mostly on interpersonal relationships. These authors suggested that exchange relationships will emerge if the participants perceive mutual benefits from their interactions. Exchange partners will remain involved in their relationships as long as they perceive that it is their most attractive option. It is also one of the central tenets of SET that greater social penetration, interdependence, and cooperation will result in greater mutual rewards for the partners (Gabarro, 1987). SET has been used rather extensively in recent years for the study of inter-organizational relationships (e.g., Cook,

1977; Levinthal and Fichman, 1988), particularly of vertical relationships (e.g., Anderson and Narus, 1984, 1990; Dwyer, Schurr, and Oh, 1987; Smith, 1992). In addition, SET constitutes an appropriate framework for the study of JVs. This approach is consistent with Tory (1989), who noted that exchange was a valid concept for international business research. Arndt (1979) described JVs as one of the most frequent forms of inter-organizational exchange. Principles of SET can also be found in Inkpen's (1992) recent research on learning in JVs.

Our conceptual framework borrows elements from these two theoretical approaches, since they appear to be complementary with regard to the scope and purpose of the study. This complementarity is two-fold. First, as we will see below, SET appears to compensate for conceptual limitations of TCA regarding the concept of transaction and behavioral assumptions. Second, these frameworks provide distinct theoretical foundations which address specific sections of the division of control-performance relationship.

In the context of JVs defined as inter-organizational relationships, TCA embodies some limitations that may limit its adequacy for this research. Some authors have criticised TCA for its strict economic rationale and its assumptions, which often approximate those of neoclassical economics (Zucker, 1986; Johanson and Mattsson, 1987). For instance, TCA views inter-organizational relationships as discrete, static, and technologically separable exchange transactions. Accordingly, TCA tends to neglect the social context surrounding

transactions, as well as the exchange of social and cultural elements inherent to economic transactions (Granovetter, 1985; Perrow, 1986; Hill, 1990). Thus, TCA appears in some instances to be inadequate for examining inter-organizational relationships, such as JVs, where firms are involved in repetitive exchange. In contrast, SET allows the inclusion of economic and social aspects in the analysis of relationships (Dwyer, Schurr, and Oh, 1987; Hallén, Johanson, and Seyed-Mohamed, 1991). SET views relationships as dynamic and iterative processes shaped by the actions of the firms (Van de Ven and Walker, 1984).

Furthermore, TCA assumes that economic actors are basically opportunistic (Granovetter, 1985) and that they exhibit "self-interest-seeking with guile" behaviors (Williamson, 1975: 26). In this context, only hierarchies can reduce risks of opportunistic behaviors, and thus minimize related transactions costs. Participants to a transaction are protected from opportunism not by trust or commitment but by a substitute—the institutional arrangement mediating their exchange (Maitland, Bryson, and Van de Ven, 1985). While TCA acknowledges the possibility of trust or commitment in market transactions, these transactions are considered exceptions, and not the usual state of affairs (Williamson and Ouchi, 1981; Williamson, 1985). This behavioral assumption also implies that frequency of transaction is a factor of transaction costs. In contrast, SET will suggest that frequent interactions offer the opportunity to develop cooperation and exchange (Perrow, 1986; Johanson and Mattsson, 1987).

With economists minimizing the role of trust and commitment in exchange relationships (Hirschman, 1982; Lorenz, 1988), TCA may not be adequate to study factors supporting the emergence of trust and commitment. In turn, SET views trust, commitment and conflict as critical components of social exchange processes (e.g., Blau, 1964; Cook, 1977). Moreover, social exchange theorists have given considerable attention to the impact of power on the dynamics of relationships. As a result, social exchange theory provides an appropriate theoretical base for the analysis of the impact of control on the quality of relationships in JVs, including the development of trust, commitment, and conflicts. In fact, power and control are closely related concepts. Power can be defined as the ability to influence the behavior and output of an entity (Dahl, 1957; Schopler, 1965; Etzioni, 1965). In turn, control can be seen as the actualization of that ability (Etdar, 1978; Lecraw, 1984; Provan and Skinner, 1989), or the reflection of a firm's power position (Blodgett, 1987). Many researchers have used these two terms interchangeably (Kelley and Thibaut, 1978; Wilkinson, 1979; Anderson and Narus, 1984).

In addition, SET and TCA are complementary in their focus on the division of control-JV performance relationship. The SET framework can provide the theoretical underpinnings required for examining the impact of the division of control structure in JVs on the development of trust and commitment and the occurrence of conflicts in these organizations. In turn, TCA is especially relevant for studying how these relationship dynamics variables will affect the

performance and efficiency of JVs. Therefore, it is expected that the combination of these two frameworks will provide a more integrative view of JVs and their organizational dynamics. It should also allow this study to identify conditions under which TCA and SET may be appropriately applied to the study of interfirm cooperation.

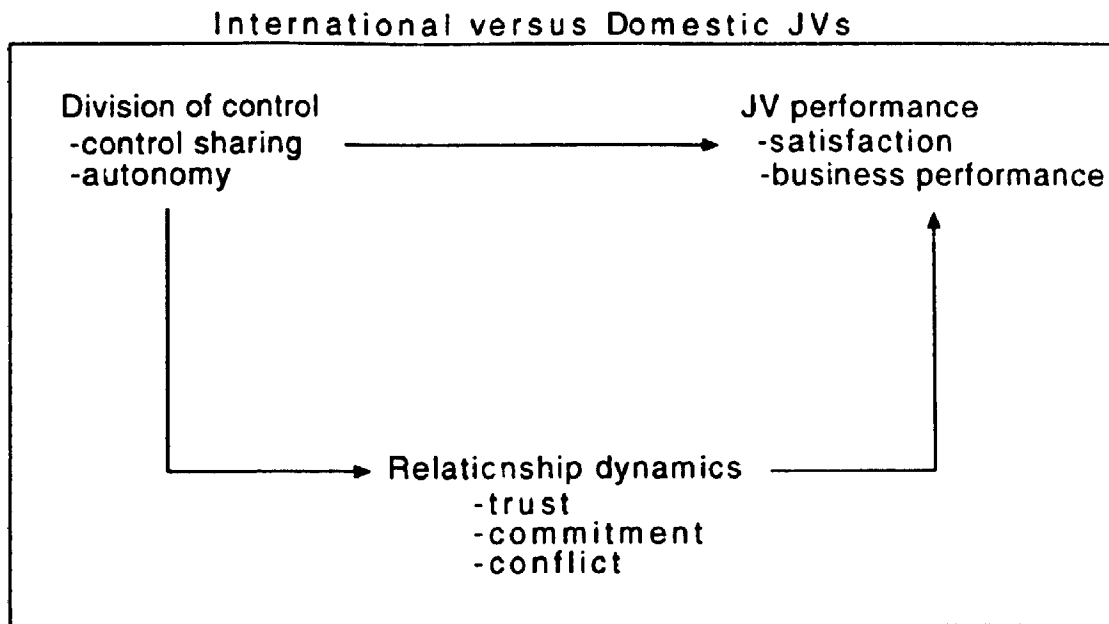
2. The research model

The following section presents the different components of this study's research model. As presented in Figure 4-1, the model is organized around three groups of constructs: the division of control — control sharing and autonomy, relationship dynamics variables — trust, commitment, and conflict, and JV performance variables — business performance and parent firms' satisfaction. Compared to other models of the division of control-performance relationship, this model integrates the impact of trust, commitment, and conflict on the dynamics of JVs, as well as the moderating effect of the international versus domestic nature of JVs.

JV performance

In this study, two dimensions of JV performance are of particular interest: parent firms' satisfaction and business performance.

FIGURE 4-1
The division of control-JV performance relationship:
A research model



Parent firms' satisfaction

In most studies, the construct of satisfaction is among the most important outcomes of inter-organizational relationships (e.g., Schaan, 1983; Beamish, 1984; Hill, 1988; Anderson and Narus, 1990; Geringer and Hébert, 1991). In particular, partners' satisfaction has been found to be an effective predictor of their future actions in partnerships (Blumenthal, 1988; Anderson and Narus, 1990), a critical determinant of the long-term continuity of a relationship (Gladstein, 1984; Anderson and Weitz, 1989), and a necessary precursor to long-term performance (Crosby, Evans, and Cowles, 1990). Indeed, unless a parent firm is satisfied with a relationship such as a JV, it will be unlikely to

remain involved in the jointly-owned arrangement. In this context, satisfaction appears as a relevant construct for this study.

Building from Anderson and Narus (1984), satisfaction can be evaluated globally, and based on the appraisal of a JV in general. In fact, satisfaction with the JV can be defined as the positive affective state resulting from the appraisal of general and specific aspects of the JV. It is an overall assessment of a parent's satisfaction, a construct similar to the one used in Blumenthal (1988) and Geringer and Frayne (1993), among others.

In addition to being evaluated globally, satisfaction can be measured according to specific elements. In particular, satisfaction can be assessed with respect to the performance of the JV and the relationship between the parent firms. Satisfaction with the JV performance refers to the positive affective state resulting from the specific appraisal of the performance of the JV. A similar construct is found in Beamish (1984) and Tillman (1990). The other construct is the satisfaction with the relationship existing between the parent firms. This construct can be defined as the satisfaction resulting from the specific evaluation of the quality of the relationship between the partners in a JV. Considered as being an important element of the dynamics of JVs (Killing, 1983; Beamish, 1984; Geringer, 1986; Beamish and Banks, 1987; Roos, 1989), this aspect of the partner's satisfaction merits close examination.

Furthermore, two levels of satisfaction are considered in this study. One level may be termed individual, and is expressed by each parent firm individually. A second level involves mutual satisfaction, or the extent to which both parties in a JV are satisfied. Mutual satisfaction with the JV, its performance or the relationship between the parent firms, represents an aggregation of the individual satisfaction reported by each of the parent firms. In accordance with Schaan (1983) and Beamish (1984), the use of only one of the parents' satisfaction is believed to be an incomplete method of assessing satisfaction in a JV. JVs are jointly-owned entities and partners have both divergent and convergent interests and objectives. Therefore, it appears necessary to measure both parents' satisfaction, or their mutual satisfaction, with the JV and its performance, in order to obtain a reliable and thorough image of the venture, its organizational dynamics, and the resulting attitude of the parent firms.

Geringer and Hébert (1991) found significant correlations between parent firms' assessments of general aspects of JV performance. Thus, the examination of individual satisfaction may be a justifiable and reliable option and mutual satisfaction may provide little supplementary information. Nevertheless, the authors admitted that differences in partners' perceptions regarding specific aspects of a JV can warrant multi-source approaches such as the one proposed in this research. In addition, Roos' (1989) results show different relationships between the constructs of analytical scope, entrepreneurial competence and internal push and performance outcomes for the Swedish parents, as compared

to the Norwegian partners. These results and conclusions support the idea of examination of both parents' perspectives of their satisfaction in order to provide a reliable and enhanced understanding of the dynamics of JVs.

Business performance

In proposing business performance as the second performance construct in our model, some issues are important to consider. Particularly, the parent firm management's assessment of the extent to which a JV has achieved the objectives for which it was formed is an essential dimension of the evaluation of a JV's performance. This assessment can be interpreted as a key determinant of the satisfaction of the parent firm, and of its decisions regarding the JV. In other words, devoting attention to this assessment is likely to provide improved understanding of the variables affecting parent firms' satisfaction and the decisions linked to the management and the survival or dissolution of a JV. Furthermore, in forming JVs, parent firms pursue a variety of objectives, ranging from technology transfer or market access to competence learning (Harrigan, 1985; Hamel, 1991). To account for this variety, business performance must be assessed multidimensionally. This approach is consistent with Schaan (1983), who suggested that the performance of a JV was a multidimensional construct.

As a result, business performance is defined as the extent to which a JV achieves the objectives and expectations of a parent firm at the time of the

formation of the venture (Geringer and Hébert, 1991, 1992). As with satisfaction, this perceptual construct can be evaluated individually, as well as mutually, through the aggregation of both parents' assessment. With this aggregation, it is possible to account for potential divergences between partner firms' assessments and expectations. Furthermore, the use of business performance as a complement to a satisfaction-based measure is consistent with the trend in recent research toward the use of multi-dimensional measures of performance.

Trust

Trust is a critical concept in trying to understand relationships, at the level of persons, groups, organizations, societies, or supranational systems (Bonoma, 1976; Zucker, 1986). Golembiewski and McConkie (1975; p.131) suggested that there was "no other single variable which so thoroughly influences interpersonal and intergroup behavior." Scanzoni (1979; p.79) viewed trust as "a kind of catalyst or critical juncture" in a relationship. In the absence of trust, a relationship cannot be stable, nor expand in order to result in greater interdependence, exchange, and cooperation between the partners (Blau, 1964; Pruitt, 1981). Partners in a relationship may also exhibit defensive behaviors that might limit cooperation and exchanges within the relationship (Gibb, 1964). That situation might foster increasingly mistrusting behaviors, reduce the value of the relationship, and ultimately result in the relationship's termination (Golembiewski and McConkie, 1975). The presence of trust develops tolerance to the inevitable

short-term inequities in relationships, reduces potential for conflicts, and supports the belief among the partners that they will be compensated by longer-term benefits (Blau, 1964; Ouchi, 1980; Dwyer, Schurr, and Oh, 1986).

In organization and transaction costs theory, trust has been acknowledged as the most efficient mechanism for governing transactions (Ouchi, 1980). The establishment of trust in a transaction is associated with trustful norms of exchange, high goal compatibility, cooperative sentiments and reduced risk of opportunistic behaviors. Similarly, in addition to reducing control requirements, trust facilitates inter-organizational transactions and minimizes the costs associated with such transactions (Young and Wilkinson, 1989; Bromiley and Cummings, 1992). In JVs, the presence of trust between partner firms has also been described as a critical variable. Trust reduces the incentives for opportunistic behaviors. It motivates the partners to take a longer-term perspective of their involvement in the venture. Thus, it favors the long-term viability and efficiency of JVs (Beamish and Banks, 1987).

In addition, trust is a necessary requirement for the creation of an inter-organizational relationship (Zucker, 1986). Without trust, partner firms will be unlikely to commit the resources and time necessary for forming a relationship. This is especially true in the case of JVs, that often involve significant amounts of key resources and core competencies. In the absence of trust, a contract linking the two parties may even be impossible to write (Macaulay, 1963). Within:

this perspective, trust is essentially dynamic. It evolves and develops over time, and in conjunction with the actions of the partners (Van de Ven and Walker, 1984; Levinthal and Fichman, 1988). Trust is both an input and an outcome of a relationship.

Building from the work of several scholars who have given attention to the concept (e.g., Blau, 1964; Deutsch, 1973; Scanzoni, 1979; Pruitt, 1981; Anderson and Narus, 1990), trust can be defined as the parent's belief that its partner is ready to perform actions that will result in positive outcomes for the JV, and to avoid undertaking actions that would result in negative outcomes. Consistent with Anderson and Weitz (1989) and Anderson and Narus (1990), this definition views trust as a cognitive belief, rather than as risk-taking behavior resulting from a belief that the partner will behave according to some "correct" standards (Smith, 1992; Bromiley and Cummings, 1992). The latter perspective has been used, among others, by Dagusta (1988) and Coleman (1990).

Furthermore, in this study, the focus is on both individual and mutual trust, that is, the trust of both parents. In accordance with Beamish (1984), it is believed that examining the trust of only one parent firm will provide a valuable but incomplete perspective of the dynamics and relationship climate of a JV. Anderson and Weitz (1989) also suggested that, in the end, mutual trust was more likely than strict individual trust. In fact, a party is unlikely to have faith in its partner if it believes the partner mistrusts it (Burgess and Huston, 1979).

Examination of mutual trust thereby enables an examination of the overall extent of trust in the JV, rather than simply a parent's individual trust without accounting for the trust or mistrust expressed by its partner.

Trust and JV performance

The presence of trust is expected to have positive consequences for performance and satisfaction outcomes in JVs. Basically, in an atmosphere, exchanges are easier and less costly to complete (Williamson, 1975). The presence of trust decreases the transaction costs resulting from bargaining, auditing, and from conflicts and opportunism. These potential transaction cost reductions can be translated into economic benefits. In addition, the development of trust in a relationship permits better communication among the partners (Dwyer, Schurr, and Oh, 1987). Its presence is perceived as a condition for the development of cooperation (Deutsch, 1973). Trust allows for greater exchanges between the partners, the reinforcement of the relationship, and the development of commitment (Scanzoni, 1979; Dwyer, Schurr, and Oh, 1987). Mutual trust reduces pressures for dissolution and supports a focus on cooperative behaviors and the achievement of joint objectives among the partners.

Therefore, it is expected that the presence of high levels of trust in a JV will be a factor of higher performance for that venture. As discussed earlier, Beamish and Banks (1987) argued that in a context of mutual trust, parent firms

will be more likely to work together, to avoid opportunistic behaviors, and to commit the resources and time required for the successful achievement of the JV's performance objectives. Since JVs are essentially formed to pool parents' resources and competencies, their inability to access these resources and competencies can seriously threaten their performance. Furthermore, high levels of trust will ensure that the JV is managed in ways consistent with the parents' respective interests and goals. This should result in higher mutual satisfaction than if the JV was characterized by mistrust, apprehension, and opportunism.

Empirical evidence (e.g., Subieta, 1991; Inkpen, 1992) also supports the contention that the presence of trust should result in higher performance. Therefore, the following hypothesis can be formulated:

- H1: An increase in the level of trust in a JV will result in an increase in JV performance.
- H1a: An increase in a parent firm's trust in its partner will result in an increase in its assessment of JV performance.
- H1b: An increase in mutual trust in a JV will result in an increase in the mutual assessment of JV performance.

Commitment

Many researchers have studied the concept of commitment in interpersonal and inter-organizational exchange relationships (e.g., Becker, 1960; Burgess and Houston, 1979; Williamson and Ouchi, 1981; Beamish, 1984, 1988;

Levinthal and Fichman, 1988; Anderson and Weitz, 1992). Cook and Emerson (1978) suggested that it was commitment, or its absence in economic transactions, that distinguished social exchange theory from economic exchange theory. Commitment has often been equated with immobility, transactional perseverance, or a binding force between exchange partners that can limit their mobility and result in the maintenance of a relationship (Blau, 1964; Cook, 1977; Salancik, 1977; Seabright, Levinthal, and Fichman, 1992). Some scholars have also described the emergence of commitment as an advanced level of development of a relationship (Thibaut and Kelley, 1959; Scanzoni, 1979; Gabarro, 1987).

Typically, committed relationships exhibit at least two fundamental characteristics. First, partners "make a pledge of relational continuity" (Dwyer, Schurr, and Oh, 1987; p.19). Partners demonstrate their commitment through loyalty, cohesion, or solidarity, and their willingness to adopt a long-term perspective regarding their involvement in the relationship. Partners also limit the exploration of alternative relationships (Cook, 1977; Scanzoni, 1979). Second, the partners agree to provide the relationship with the required resources on a consistent basis (Blau, 1964). They are willing to commit resources and skills, and "to make short-term sacrifices to realize long-term benefits" (Anderson and Weitz, 1992; p.3). In sum, committed relationships are characterized by durability and a willingness to invest in the relationship.

Evidence suggests that relationships exhibiting commitment are more the exception than the norm (Van de Ven and Walker, 1984; Williamson, 1985; Dwyer, Schurr and Oh, 1987; Anderson and Weitz, 1992). Commitment is seen as a function of the investments, and particularly the specialized investments, made in the relationship by the partners (Cook, 1977). In contrast to unspecialized investments, specialized investments do not retain their value outside the relationship. As a result, they become pledges or hostages that may serve to support and prolong the relationship (Blau, 1964; Williamson, 1983). Such investments can take various forms, including psychological attachment and involvement, equipment goods, inter-organizational coordination mechanisms facilitating exchanges, distinctive competencies or skills singularly adapted to the partners' needs (Williamson, 1975; Van de Ven, 1976; Rusbult, 1980; Levinthal and Fichman, 1988). These investments increase the costs associated with the termination of a relationship and the establishment of alternative relationships. Therefore, commitment can be interpreted as the result of a process of interactions and exchanges between partners in which partners make investments.

A party's commitment may also be affected by its perception of its partner's commitment to their exchange relationship (Anderson and Weitz, 1992). Mutually oriented actions, or actions consistent with both parties' interests, may signal a commitment to the relationship (Camerer, 1988) and may induce reciprocity (Gouldner, 1959; Blau, 1964). In contrast, if it does not perceive

commitment on the part of its partner, a party may instead engage in defensive behaviors and may limit inter-organizational exchanges. This may result in ineffective exchanges, dissatisfaction, and ultimately, in the dissolution of the relationship. In addition, the presence of mutual trust is often perceived as a major factor in the development of commitment (Macaulay, 1963; Scanzoni, 1979; Dwyer, Schurr, and Oh, 1987; Seabright, Levinthal, and Fichman, 1992).

In this study of JVs, commitment is defined as the degree to which a parent firm feels bound to the stability and success of a JV. Building from Beamish (1984) and the above discussion on committed relationships, three dimensions of commitment appear important: commitment to the JV in general, commitment to the partner in the JV, and commitment to the success of the JV. This conceptualization provides an evaluation of the overall commitment of a parent firm, while taking into account the different characteristics of commitment. It allows a distinction between the commitment to the JV form as one organizational mode for the relationship, and the commitment to the specific partner. Furthermore, the commitment to the success of the JV focuses on a partner's readiness to engage the resources and efforts required for the success of the venture. This dimension emphasizes one particular characteristic of commitment, the willingness to supply resources to the relationship on a consistent basis. Therefore, it is believed that this conceptualization provides an enhanced and valid assessment of the concept and the characteristics of commitment in JVs.

Furthermore, as discussed earlier for trust, both individual and mutual commitment must be probed. Mutual commitment allows for an assessment of the overall level of commitment in the JV, and not only each parent's individual perspective. Since both partners need to exhibit commitment in order for a relationship or a JV to be viable and successful (Anderson and Weitz, 1992), mutual commitment is an appropriate aspect of a relationship to examine. Furthermore, as discussed earlier, a parent's commitment may be heavily influenced by its perception of its partner's commitment. As a result, in order to develop a thorough understanding of commitment in JVs, it appears desirable to examine parent firms' individual commitment and mutual commitment.

Commitment and JV performance

Commitment is associated with benefits similar to those resulting from the development of trust. Its emergence is expected to enhance mutual reward from the relationship, and to reduce both the pressures for dissolution of the relationship and the risks of opportunism (Scanzoni, 1979). Committed partners are expected to avoid opportunistic behaviors and to engage in mutually benefiting exchanges (Beamish and Banks, 1987; Buckley and Casson, 1988). They also agree to invest in the relationship those resources required for its development and success (Blau, 1964; Dwyer, Schurr, and Oh, 1987). Finally, commitment results in enhanced exchanges and greater cooperation (Tjosvold, 1984; Anderson and Weitz, 1992). Therefore, in the presence of commitment,

parent firms are more likely to avoid disagreements that could damage their relationship and, ultimately, the cooperative venture itself. Committed partners will also be more likely to cooperate and invest the resources and efforts required for successful achievement of the JV's performance objectives. In sum, JVs where parent firms exhibit higher commitment are expected to display higher performance, compared to JVs where parent firms show little commitment. By extension, the presence of high levels of mutual commitment are expected to impact positively on JV performance.

This rationale is supported by results from several prior studies. For instance, in the context of LDC IJVs, Beamish (1988) emphasized the importance of commitment for JV performance by stating that, "nearly all the problems associated with managing joint ventures in LDCs could be viewed in terms of ... whether partners were committed to the joint venture structure in an international context" (p.44). Essentially, Beamish's study showed that JVs in which the MNE partner exhibited commitment were achieving higher satisfaction and performance. Roos (1989) supported this conclusion by finding that an "internal push," a construct containing elements of commitment, had a positive effect on performance. Geringer's (1986) study also underlined the absence of commitment as a factor causing JVs to be unstable and short-lived. Therefore, the following hypotheses can be formulated:

- H2: An increase in the level of commitment in a JV will result in an increase in JV performance.

- H2a: An increase in a parent firm's commitment will result in an increase in its assessment of JV performance.
- H2b: An increase in mutual commitment in a JV will result in an increase in the mutual assessment of JV performance.

Conflict

Conflict is an inherent element of a relationship (Blau, 1964; Aldrich, 1977). Since organizations strive to maintain their autonomy, interdependent relationships tend to create conflicts (Gouldner, 1959; Thompson, 1967; Van de Ven and Walker, 1984). Inter-organizational relationships embody a juxtaposition between the drive for autonomy and the desire for cooperation (Tuite, 1972; Reve and Stern, 1979). This context results in the coexistence of both cooperative and conflictual motives within any relationship (Aldrich, 1977; Schmidt and Kochan, 1977).

Scholars have conceptualized conflict in a variety of ways. In proposing an integrative view of this concept, Pondy (1967) presented a model where conflict was conceptualized as a process consisting of five stages: latent conflict, perceived conflict, felt conflict, manifest conflict, and conflict aftermath. Latent conflict refers to underlying conditions of conflict, such as competition for scarce resources, desire for autonomy, and goal divergence. Perceived conflict is associated with the awareness of the presence of latent conflicts. Felt conflict involves affective consequences, or feelings of anxiety and disaffection, in

addition to the perception of conflict. Manifest conflict is characterized by overt conflictful behaviors, or behaviors blocking another party's goal achievement, which are the expression of the disagreements between the parties. Finally, conflict aftermath is the stage where conflicts are either resolved or suppressed. Thomas (1976) proposed a similar model of conflict, involving a "frustration-conceptualization-behavior-outcome" sequence. The key issue here is that both models identify a psychological as well as a behavioral dimension of conflict.

This study focuses on the behavioral aspect of conflict, or more specifically, on manifest conflict. This is the approach favored in research on conflict in vertical marketing relationships (e.g., Brown and Day, 1981) and in JVs (Habib, 1983, 1987; Tillman, 1990). In a similar vein, Katz and Kahn (1978; p. 613) suggested that trying to distinguish among the different types or stages of conflict "are appropriate questions to understanding conflict but not to defining it; it [conflict] is defined by the collision of actors." Consequently, building from the definition developed by Barclay (1991), conflict in a JV is defined as an interaction between parent firms, where actions of one parent tend to prevent or compel some outcome against the resistance of the partner firm. This concept of conflict emphasizes its behavioral dimension.

Conflict and JV performance

As in other inter-organizational relationships, conflict is an important

feature of JVs. In JVs, the presence of two parent firms and in particular differences between them in terms of management style, culture, and operational practices represent major factors conducive to conflict (Killing, 1983; Devlin and Bleackley, 1988). Habib (1987) concluded that the disparity in the parent firms' goals was a major source of conflict in international JVs.

Nevertheless, inter-partner conflicts have also been identified as a key factor in the failure and performance problems of JVs. Typically, frequent disagreements in a relationship tend to cause frustration and unpleasantness, and thus result in dissatisfaction (Robicheaux and El-Ansary, 1975; Anderson and Narus, 1984, 1990). In addition, conflict may harm accomplishment of the relationship's task. Frequent disagreements may result in complex, time-consuming decision making, or in obstructive behaviors that simply block any decision making (Killing, 1983). Energy, time, and resources are devoted to conflict resolution rather than activities productive for the JV. Such situations may limit a JV's ability to cope with and to respond to changes in its environment, and thus, to be successful in its business. Conflict may also result in parent firms avoiding cooperation and withholding resources required by the JV, thereby limiting its ability to achieve its objectives (Friedmann and Kalmanoff, 1961; Friedmann and Beguin, 1971; Killing, 1982, 1983). Some empirical studies also suggest that there is a negative relationship between conflict and JV performance. In a study of Japanese-Thai IJVs, Tillman (1990) found that conflict had a significant negative impact on satisfaction and performance. Other studies

have also suggested that conflicts were a major catalyst for the failure and disappearance of IJVs (Simiar, 1982; Reynolds, 1984). As a result, the following hypotheses can be formulated:

- H3: An increase in the level of conflict in a JV will result in a decrease in JV performance.
- H3a: An increase in a parent firm's assessment of conflict will result in a decrease of its assessment of JV performance.
- H3b: An increase in the mutual assessment of conflict in a JV will result in a decrease in the mutual assessment of JV performance.

The division of control: control sharing and autonomy

Parent control refers to the process through which parent firms influence the behavior and output of their JVs. In this study, and consistent with the approach pursued by Killing (1982), Beamish (1984), and Geringer (1986), control is conceptualized as being dependent on the locus of the decision-making process. Within this perspective, two dimensions of the division of control can be distinguished. The first one is related to the division of decision making responsibilities between the partner firms. It is the extent of control sharing, or the extent to which control is shared between parents. The second dimension involves the division of decision making responsibilities between the parents and the JV's management, or the autonomy of a JV. Geringer (1986), Hill (1988) and Blumenthal (1988), among others, made a similar distinction between control

sharing and autonomy.

In his pioneering work, Killing (1982) identified three basic division of control structures: dominant control, shared control and independent JVs. More recently, split control JVs, where each parent's control is selective and exercised over specific aspects of a JV, were also proposed. Nevertheless, both control sharing and autonomy can be conceptualized as a continuum. For instance, at one end of the control sharing continuum, are dominant control structures, e.g., Killing's dominant control JVs. This structural form involves very limited control sharing between the parent firms. At the other end of this continuum, are shared control structures with extensive control sharing, e.g., Killing's shared control JVs. The same rationale applies to the autonomy of a JV. The main advantage of this conceptualization is its ability to account for the division of control over specific activities rather than simply providing an overall perspective of the control structure which is in place.

Division of control, relationship dynamics and JV performance

The exercise of control in JVs has been associated with different roles and benefits. The conventional perspective of control suggests that the exercise of control is a mechanism to reduce the transaction costs associated with JVs. In fact, some elements inherent to JVs can represent sources of important transaction costs. Specifically, goal incongruence as well as coordination

between parents can generate substantial transaction costs, associated primarily with opportunistic behavior and asset-specificity (Williamson, 1975, 1985; Ouchi, 1977, 1980). Risks of dissemination of a firm's specific advantage or proprietary technology may also result in such transaction costs. Dissemination following opportunistic behaviors by a firm's partner may reduce the stream of rent a firm may appropriate from the exploitation of its specific advantage. These different transaction costs can limit the potential gains from cooperation and pose serious threats to the venture's performance. Therefore, control is exercised in order to reduce the occurrence and risks of opportunism and dissemination of proprietary assets. The exercise of control may enable a firm to minimize the transaction costs that could possibly limit its strategic benefits and destabilize a JV.

Nevertheless, this perspective of control provides an incomplete assessment of the costs and benefits associated with the exercise of control. It does not account for the resource commitments and costs associated with control. Indeed, since the exercise of control over a JV involves costs and a commitment of resources, extensive control can generate significant governance and bureaucratic costs (Hill and Jones, 1988; Geringer and Hébert, 1989). These costs may limit the efficiency of the JV, and offset its competitive benefits (Contractor and Lorange, 1988; Hill and Kim, 1988; Ohmae, 1989). Therefore, the critical issue for a parent firm becomes one of exercising control in such a manner that the risks and costs related to opportunism and asset-specificity are minimized, while avoiding uneconomical resource commitments.

More importantly, however, this perspective of control does not account for the impact of control on the quality and dynamics of the relationship between parent firms, and thus on the development of trust, commitment, and conflict.

As a first step toward an enhanced understanding of these impacts, Geringer and Hébert (1992) used the concept of "mutual hostage position," based on transaction costs analysis, to examine the relationship between the division of control and JV performance. Specifically, they relied on the mutual hostage position particular to JVs and to different division of control structures. At the origin of the concept of mutual hostage position is the notion that transactions can be stabilized through the exchanges of hostages (Schelling, 1960; Williamson, 1983). Because of the joint investment in assets and resources associated with them, JVs are "a form of mutual hostage positions" (Kogut, 1988b: p. 175). Consistent with Kogut (1989), the stronger this position is in a JV, the stronger are the incentives for the stabilization of the relationship and the development of mutual trust and commitment.

Based on this mutual hostage argument, Geringer and Hébert (1992) suggested that cooperation and mutual commitment are more likely to emerge in JVs with extensive control sharing than in those in which one parent firm dominates. Consequently, shared control JVs would exhibit better performance than dominant control JVs. The control position of the dominant partner reduces the impact of the mutual hostage position particular to JVs. The dominant parent

firm has less incentive to forbear and to avoid opportunistic behaviors. Such a situation is prone to conflict. Moreover, the interests and commitment of the partner may suffer from its relative distance or limited involvement in the JV, its activities, and its management. This will probably hinder the sharing of resources and competencies which may be essential to venture performance. Dissatisfaction, conflict, and lack of commitment by the partner are likely to involve substantial costs that could harm the JV's stability and performance. In contrast, in JVs with extensive control sharing, the mutual hostage position is expected to be stronger. This may appear especially plausible since shared control JVs often have a 50/50 equity split, while dominant partner JVs are generally majority owned by the dominant partner (Beamish, 1985). This mutual hostage and equal equity position may serve to stabilize the relationship, ensure continuous cooperation, and limit opportunism (Dore, 1983; Axelrod, 1984; Larson, 1988).

Elements of social exchange theory can be introduced to support and further develop this reasoning. SET can be used particularly to examine the effects of the division of control on relationship dynamics variables, that is, on trust, commitment, and conflict in JVs, in addition to the effects on performance. Specifically, these effects can be investigated by giving particular attention to the balance of power in a relationship.

Power is one of the central concepts of social exchange theory (e.g.,

Emerson, 1962; Blau, 1964; Hallén, Johanson, and Seyed-Mohamed, 1991). In a relationship, power, or the capacity of one party to influence the outcomes of another party (Rubin and Brown, 1975; Subieta, 1991), results from the possession of resources that the other party needs, and from control over the sources of these resources (Emerson, 1962). The relative dependence of the partners determines their relative power and thereby the balance of power in the relationship. In turn, reliance on this perspective for this study's purpose is consistent with the notion that the division of control in a JV is essentially a result of negotiations, and the reflection of the parent firms' respective power bases (Blodgett, 1987; Gray and Yan, 1992).

Within this perspective, the balance of power between partners has been described as having a significant impact on the dynamics and viability of a relationship (Emerson, 1962; Blau, 1964; Burgess and Huston, 1979). In particular, the presence of asymmetry in the distribution of power has been thought to have a destabilizing effect on a relationship (Burgess and Huston, 1979; Hatfield, Utne, and Traupmann, 1979). In a situation of power imbalance, the high-power party tends to exploit its power advantage (Bannister, 1969). In reference to the inevitability of the use of power by the high-power party, Muller (1970) stressed that "to have it is to use it" (p.105). Essentially, the high-power party's position encourages it to use its power to its advantage, and thus, at the expense of the other party, in order to gain a greater share of the rewards from the exchange (Roering, 1977; Cook, 1977; Wilkinson and Kipnis, 1978; Frazier

and Rody, 1991). In contrast, in balanced relationships, the potential for exploitation may be reduced. No party enjoys a favorable power differential that enables it to alter the exchange to its own advantage. Thus, these relationships are expected to be more stable and viable than unbalanced ones.

More specifically, power imbalance can be associated with dissatisfaction by the low-power party (Anderson and Narus, 1984) as well as with poor performance of the relationship (Lusch, 1976). In fact, following attempts by the high-power party to exploit its power position, opportunistic behaviors, decisions without mutual consent, and what may be perceived as abuse of power and inequity, the low-power partner is likely to express dissatisfaction. These efforts to exploit the dependence of the low-power partner and to alter the exchange serve to reduce the benefits the low-power partner receives. Complying with the more powerful party's decisions or dictates involves costs, either in taking resisting actions or in relinquishing some of the benefits of the relationship.

For similar reasons, the low-power partner is likely to be apprehensive about the stronger party's intentions and behavior. According to Anderson and Weitz (1989), "when one party possesses inordinate leverage over the other, the weaker party becomes mistrustful" (p.315). These apprehensions may weaken the attachment of the low-power partner to the relationship as well as its interest in investing time and resources in a relationship with limited benefits. In contrast, when parties perceive they are "calling the shots" and that they are able to

influence their partner, they are more likely to be satisfied with the relationship (Wilkinson, 1979; Anderson and Narus, 1990). More powerful parties in a relationship are also likely to be more trusting (Deutsch, 1958; Solomon, 1960; Young and Wilkinson, 1988). Their power position enables them to affect the terms of exchange and to influence the other party in ways consistent with their interests. Thus, power imbalance and the resulting mistrust and apprehension by the low-power partner are likely to impede the development of trust and commitment in the relationship (Walton, 1969; Pruitt, 1981; Zucker, 1986; Dwyer, Schurr, and Oh, 1987). Power imbalance may also limit cooperation between the partners, and hence their capacity to achieve the objectives for which the relationship was established (Anderson and Narus, 1984, 1990).

Just as it negatively impacts satisfaction, performance, commitment, and trust, power-imbalance is expected to result in greater conflict (Gurr, 1970; Korpi, 1974; Pruitt, 1981; Gray and Brown, 1981). The position of the high-power party poses a constraint on the low-power party's autonomy. This constraint is often perceived as aversive and thereby constitutes a source of conflict (Anderson and Narus, 1984). Furthermore, attempts by the high-power party to exploit its position or to gain a disproportionate share of the relationship's benefits are likely to lead to conflict, just as they are expected to affect negatively the mutual trust, commitment, and satisfaction in the relationship. Imbalanced vertical relationships have been found to exhibit greater conflict than balanced ones (Robicheaux and El-Ansary, 1975; Etgar, 1979; Anderson and Narus, 1984).

The association between power imbalance and conflict is also consistent with Brehm's (1966) theory of psychological reactance. This theory states that when one individual's freedom is restrained, he or she will resist and attempt to regain autonomy (Fisher, 1982; Shaver, 1987). In doing so, the low-power individual is likely to rationalize actions that may well take the form of opportunistic behaviors, and that he can perceive as justifiable (Axelrod, 1984; Provan and Skinner, 1989). These actions are likely to result in conflicts in the relationship. Similarly, Snyder and Diesing (1977) argued that cooperation supplants competition in relationships when a balance of power is achieved.

This line of reasoning, based on principles of social exchange theory and transaction cost economics, can be applied to the situation of JVs and to the effect of the division of control on relationship dynamics and JV performance. This preceding rationale suggests that in JVs with extensive control sharing, partners enjoy similar power and control positions. Therefore, in these JVs, parents will experience higher trust, commitment, satisfaction and while the ventures exhibit less conflict and higher performance. In contrast, in JVs with little control sharing, where one parent firm dominates and control is distributed asymmetrically, parent firms can be expected to demonstrate lower trust, commitment, and satisfaction, and the JV will achieve lower performance as well as greater conflict. In other words, control sharing between parent firms is expected to have a positive impact on relationship dynamics and performance variables in JVs.

Similarly, JVs with extensive autonomy entail limited power and control imbalance, since parent firms are little involved in their management and activities. This situation limits potential for one partner to alter or to exploit the relationship at its advantage, and may encourage mutual forbearance by the parents (Jarillo, 1988; Larson, 1988). It also reduces the potential for inter-partner conflict due to interference by one or both parent firms (Deloitte, Haskins and Sells International, 1989; Lynch, 1989). In addition, extensive autonomy may have the potential to minimize governance and bureaucratic costs associated with the management of JVs, which could hinder their efficiency. Thus, autonomy is expected to be positively associated with the performance and relationship dynamics of JVs.

This discussion leads to the following hypotheses regarding the effect of control sharing on the performance and relationship dynamics of JVs:

- H4: An increase in control sharing in JVs will result in an increase in JV performance.
 - H4a: An increase in a parent firm's assessment of control sharing in a JV will result in an increase in its assessment of JV performance.
 - H4b: An increase in the mutual assessment of control sharing in a JV will result in an increase in the mutual assessment of JV performance.

- H5: An increase in control sharing will result in an increase in the level of trust in JVs.

- H5a: An increase in a parent firm's assessment of control sharing in a JV will result in an increase in its trust in its partner.
- H5b: An increase in the mutual assessment of control sharing in a JV will result in an increase in mutual trust.
- H6: An increase in control sharing will result in an increase in the level of commitment in JVs.
- H6a: An increase in a parent firm's assessment of control sharing in a JV will result in an increase in its commitment.
- H6b: An increase in the mutual assessment of control sharing in a JV will result in an increase in mutual commitment.
- H7: An increase in control sharing will result in a decrease in the level of conflict in JVs.
- H7a: An increase in a parent firm's assessment of control sharing in a JV will result in a decrease in its assessment of conflict.
- H7b: An increase in the mutual assessment of control sharing in a JV will result in a decrease in the mutual assessment of conflict.

Similar hypotheses can be formulated regarding the relationships linking autonomy with the performance and relationship dynamics of JVs:

- H8: An increase in autonomy will result in an increase in JV performance.
- H8a: An increase in a parent firm's assessment of the autonomy of a JV will result in an increase in its assessment of JV performance.
- H8b: An increase in the mutual assessment of the autonomy of a JV will result in an increase in the mutual assessment of JV performance.

- H9: An increase in autonomy will result in an increase in the level of trust in JVs.**
- H9a: An increase in a parent firm's assessment of the autonomy of a JV will result in an increase in its trust in its partner.**
- H9b: An increase in the mutual assessment of the autonomy of a JV will result in an increase in mutual trust.**
- H10: An increase in autonomy will result in an increase in the level of commitment in JVs.**
- H10a: An increase in a parent firm's assessment of the autonomy of a JV will result in an increase in its commitment.**
- H10b: An increase in the mutual assessment of the autonomy of a JV will result in an increase in mutual commitment.**
- H11: An increase in autonomy will result in a decrease in the level of conflict in JVs.**
- H11a: An increase in a parent firm's assessment of the autonomy of a JV will result in a decrease in its assessment of conflict.**
- H11b: An increase in the mutual assessment of the autonomy of a JV will result in a decrease in the mutual assessment of conflict.**

International versus domestic JVs

The final hypothesis regards the comparison between IJVs and DJVs, and particularly the moderating effect of the international versus domestic nature of JVs on the division of control-JV performance relationship. In fact, the existence of national culture differences in IJVs in addition to differences in organizational culture is thought to involve unique complexity. Different national cultures

embody different attitudes, values and beliefs which find their materialization in distinct business cultures, styles and practices (Hofstede, 1980). Examples of such disparities are easily found in the JV literature. For instance, the role and dynamics of trust in JVs have been found to vary significantly among parent firms from different national cultures (Thorelli, 1986; Parkhe, 1993). Similar observations were made regarding the attitude toward control and the emphasis on learning objectives in IJVs (Ohmae, 1989; Hamel, Doz and Prahalad, 1989). The presence of parents from different countries has also been described as a source of inter-partner disagreement and conflict in IJVs, and as a major factor in their frequent failure and performance problems (Beamish, 1984; Killing, 1983; Parkhe, 1992). Thus, because of national culture differences, IJVs are expected to exhibit dynamics distinct from DJVs, where parent firms share the same national culture.

In addition, the respective distinct nature of IJVs and DJVs is expected to affect the division of control-JV performance relationship. Particularly, the use of control structures with limited control sharing may add to the inherent fragility of these organizations. Being already subject to instability and conflict fuelled by cultural differences, limited control sharing may increase the risks of conflict, dissatisfaction and poor performance. In contrast, extensive control sharing, as argued earlier, may rather support the development of trust and cooperation. It may also reduce the risks of conflict and opportunism, and the fragility of IJVs. The positive impact of control sharing will likely be greater in IJVs compared to

DJVs, where there are no national culture differences that could impede the development of trust and cooperation and favour conflict. Since cultural similarity is a stabilizing force in DJVs, one could expect that little control sharing will have more limited negative impact on JV performance compared to IJVs. In sum, this discussion suggests that the distinct nature of IJVs compared to DJVs may result in the division of control affecting the performance and relationship dynamics of these two types of JVs differently. Consequently, the following hypothesis can be formulated:

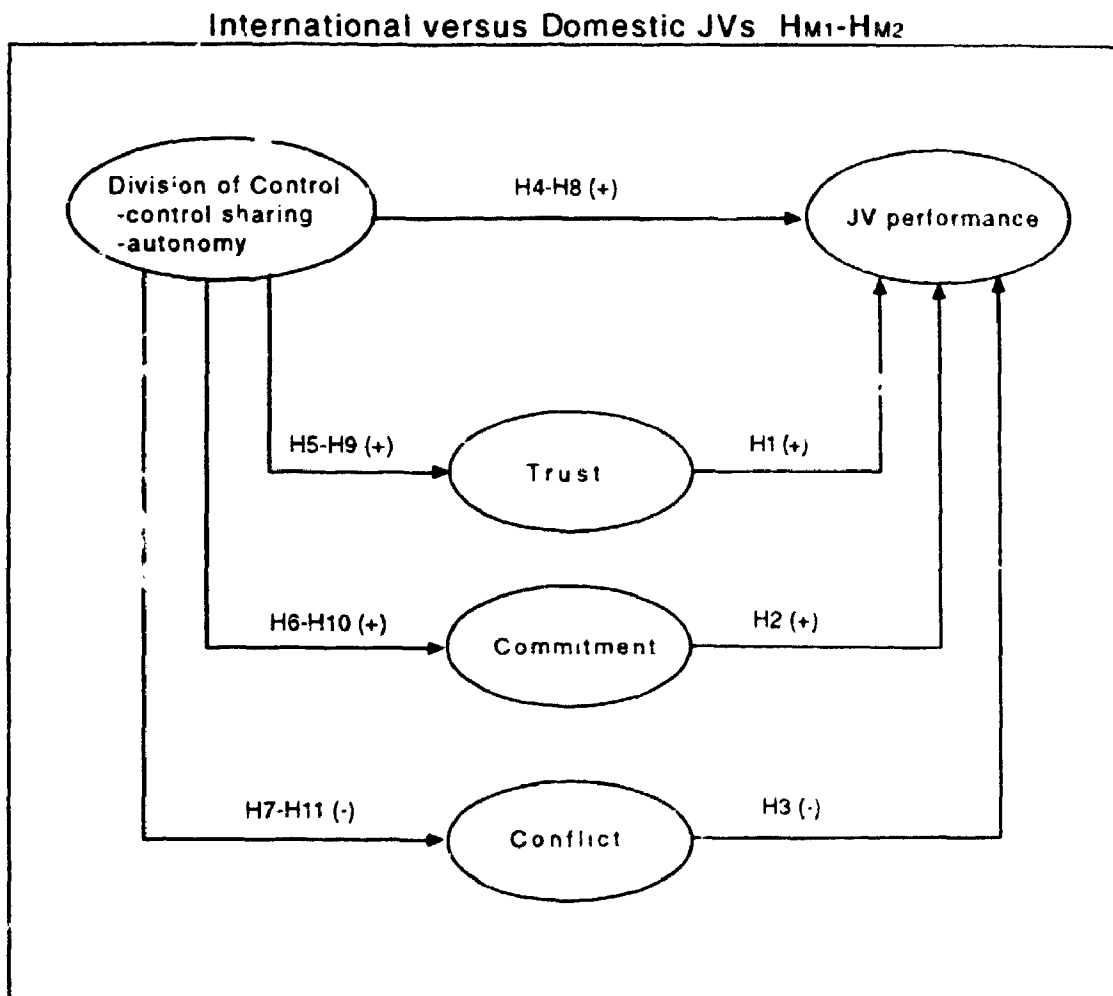
- H_{M1}: The relationship linking control sharing with JV performance and relationship dynamics will be moderated by the international versus domestic nature of a JV, that is, control sharing will affect the performance and relationship dynamics of IJVs differently compared to DJVs.
- H_{M2}: The relationship linking autonomy with JV performance and relationship dynamics will be moderated by the international versus domestic nature of a JV, that is, control sharing will affect the performance and relationship dynamics of IJVs differently compared to DJVs.

3. Summary

This chapter presented the study's theoretical framework, integrating elements from transaction cost analysis and social exchange theory in a series of hypotheses. These hypotheses pertained to the relationships linking (1) relationship dynamics variables with JV performance, (2) the extent of control sharing with JV performance and relationship dynamics, and (3) the extent of

autonomy with JV performance and relationship dynamics. Hypotheses regarding the moderating effect of the international versus domestic nature of JVs on these relationships were also proposed. These hypotheses are represented graphically in Figure 4-2.

FIGURE 4-2
The research model: Research hypotheses



CHAPTER 5

RESEARCH METHODOLOGY

This chapter outlines the research methodology used in the study to test the hypotheses developed in Chapter 4. It describes the general approach followed in this research, the unit of analysis, the data collection procedures, the measurement of the constructs, and the data analysis techniques which were employed.

1. General approach

In this research, hypotheses were tested using an ex post facto design and a cross-sectional multimethod methodology. Perceptual data were collected using a single key informant from parent firms and JVs. In contrast to most research on JVs, this study also collected data from multiple organizational sources, that is, from both parent firms, from one parent firm and the JV, or from both parent firms and the JV.

Ex post facto design

The objectives and focus of this study did not enable the researcher to

manipulate the constructs and variables involved in this study. Although such manipulation of variables could have been possible through the use of hypothetical JVs, as in Renforth (1974), this method was thought to lack both realism and validity for examining subjective and sensitive constructs such as : atisfaction, trust, or conflict. Therefore, an ex post facto research design was chosen for this research. According to Kerlinger (1973; p.379), in ex post research, "inferences about relations among variables are made, without direct intervention, from concomitant variation of independent and dependent variables."

Cross-sectional multimethod survey

For its methodology, this study drew extensively from Geringer (1986) and Blumenthal (1988), among others. Within this perspective, it used a cross-sectional multimethod design. Self-administered questionnaires distributed to key informants were combined with in-person or telephone-based semi-structured interviews with the informants.

This multimethod approach was chosen for several reasons. Mailed questionnaires represent an efficient and effective method for collecting standardized data and retrospective reports, especially in a context of geographical dispersion (Fowler, 1984). They allow informants to respond at a convenient time, and provide them with the opportunity for thoughtful

retrospection (Clover and Balsley, 1979). Furthermore, their use appears appropriate, since the constructs and the relationships examined in this research are clearly identified and developed. Previously used scales are also available for some constructs.

In turn, in-person and telephone interviews are more effective in capturing the complexities and details of a problem or a relationship between variables. Interviews also offer greater possibility of confidence and rapport building between the interviewer and the interviewee (Fowler, 1984; Kidder and Judd, 1986). These characteristics are important for achieving an enhanced understanding of constructs such as control, trust, commitment, and conflict in JVs. Finally, response rates for in-person and telephone interview-based methods are typically higher than mailed questionnaire surveys (Kerlinger, 1973; Clover and Balsley, 1979; Kidder and Judd, 1986). These interviews have also been successfully employed in prior studies on JVs (e.g., Tomlinson, 1970; Killing, 1982, 1983; Schaan, 1983; Beamish, 1984; Geringer, 1986).

In sum, this multimethod approach provided an opportunity to control for the individual limitations of the questionnaire and interview-based methods, while taking advantage of their respective strengths. This hybrid methodology offered an adequate compromise in terms of richness, nuance, generalizability, and replicability for both sound and rigorous research in business policy (Harrigan, 1983). It allowed the combination of descriptive and qualitative data with

quantitative data (Brewer and Hunter, 1989), controlled for single-method biases, and enhanced the validity of the research.

Perceptual data from single key informants

Data required for hypothesis testing were collected from a single key informant from each parent firm and the JV. Key informants were of two types: (1) parent firm senior managers who were, or had been until shortly before the data collection period, directly responsible for the management and the formation of the JVs, and (2) general managers of the JVs (JVGMs). Consistent with Campbell's (1955) criteria for key informant selection and with prior studies of JVs, the selected individuals were considered to be the best placed to describe the management and dynamics of the JVs.

Some questions have been raised about reliance on perceptual data and a single key informant approach. Regarding the use of perceptual data, Staw (1975) argued that respondents might base their answers on their own implicit theories of what causes a phenomenon or a particular result. For instance, knowledge of a group's performance could lead respondents to attribute characteristics to the group that were not evident through objective measures. Therefore, respondents might not be able to report accurately about the phenomena or processes they observed (Nisbett and Wilson, 1977). Common method variance might also constitute a threat to the validity of the results.

Furthermore, single key informant data have been suggested to be especially inadequate when informants are asked to report on complex phenomena and large organizations (Seidler, 1974; Phillips, 1981).

However, there was substantial support in prior research for the use of a single key informant strategy in this study. This approach was consistent with research indicating that self-reporting produced reliable data and represented a reliable and valid method for business policy research (Pearce, Robbins and Robinson, 1987). John and Reve's (1982) results provided empirical evidence suggesting that single key informants were a source of reliable and valid data regarding inter-organizational relationships. Prior research on JVs and pre-test interviews with multiple respondents from three firms revealed that one to three "key" senior executives in each firm typically had intimate involvement throughout the JV formation and management process and had access to the requisite data (Geringer, 1986). Comments from key informants also suggested a high level of consensus among a firm's "key" senior executives regarding perceptions of a JV's situation and dynamics.

Therefore, with prior research supporting the reliability and validity of perceptual data collected from a single key informant, this approach was used. Nevertheless, to address concerns raised by Staw (1975) and Nisbett and Wilson (1977), and to further minimize risks of biases and threats to validity, the questionnaire and interviews were organized and the questions formulated in

ways that reduced causal attributions and the impact of implicit theories. In the questionnaire, for instance, questions related to independent and dependent variables were placed on different pages. In addition, key informants were encouraged to use additional information sources if necessary, in order to refresh their memory or verify their responses on aspects of the JV, its formation, and its operations. Finally, some objective data, such as termination and duration of JVs and division of equity, were obtained in some cases from secondary sources.

Multiple organizational sources

A key characteristic of the study's methodology was the collection of data from multiple organizational sources. Specifically, this research attempted to collect data from a single key informant from at least two organizations, namely either from both parent firms, from one parent firm and the JVGM, or, ideally, from both parent firms and the JVGM. Reliance on this approach distinguished this study from most prior studies on JVs, which typically used single data sources, either a parent firm manager or a JVGM. Beamish (1984) had also argued for multiple source approaches in order to account for potential divergence between parent firms' point of view, and thus, to achieve a more reliable and valid understanding of JVs' dynamics.

Data collection from multiple sources involved substantial costs and

resource requirements. Nevertheless, this approach was believed to control for potential single-source biases and for risks of causal attributions, implicit theories and common method variance that could have constituted threats to the validity and reliability of this study's data (Cronbach and Meehl, 1955; Campbell and Fiske, 1959; Kavanaugh, MacKinney, and Wolins, 1971). In addition, multiple sources were expected to further reduce biases and threats to validity that could have resulted from reliance on perceptual data and single key informants.

In conclusion, this approach was believed to provide a reliable and valid perspective of JVs and their dynamics, compared to traditional studies that were limited to single source approaches. Furthermore, multiple sources permitted the use of a substitution method for handling missing data. In such a method, data from one source can be used as a substitute for missing data from another source. The treatment of missing data and the use of a substitution method is discussed further in the data analysis section of this chapter.

2. Unit of analysis and sampling frame

This study's objectives regarding hypothesis testing, external validity, and generalizability were given consideration in the selection of the study's unit of analysis and sampling frame. In particular, it appeared important for the sampling frame to provide an appropriate compromise in terms of both the heterogeneity and homogeneity of the respondent population. Extensive heterogeneity could

have constituted a threat to the validity of the study, while extensive homogeneity could have limited the external validity of the study (Cook and Campbell, 1979). Consequently, the decision was made to reduce the scope of the study and to control for variables that had been identified as having potential effects on the relationship examined in this research, such as the number of parent firms, their respective equity position in the JV, and the industrial sector in which the JV was operating. Specifically, the research examined JVs that met the following criteria:

- Domestic and international JVs based in Canada;
- JVs from manufacturing industries;
- Two-parent JVs where neither of the parent firms held more than 75 percent of the venture's equity;
- JVs in operation by January 1, 1985, or formed since then, but not after January 1, 1990.

Resource constraints motivated the decision to limit the study to Canada-based JVs. In addition, only manufacturing JVs were retained, in order to control for the emphasis on cost and risk sharing, as well as the particular motivations and dynamics of partnerships in primary and tertiary industries (Harrigan, 1985; Porter and Fuller, 1986).

In turn, the focus on two-parent JVs provided an opportunity to control for the influence of the number of partners on venture dynamics, as well as for the particular nature of ventures involving more than two parents (Daniels, Ogram, and Radebaugh, 1983; Geringer, 1986). In fact, the risk of conflicts, coordination and communication problems, and decision making complexity tend to increase

with parent multiplicity and may constitute serious destabilization forces for JVs (Bivens and Lowell, 1966; Killing, 1982; Zeira and Shenkar, 1990; Parkhe, 1992). In addition, ventures where one of the parents held either more than 75 percent or less than 25 percent of the equity were considered minority equity investments rather than genuine JVs. Several researchers have noted that minority equity investments are both legally and conceptually distinct from JVs (Killing, 1988; Kogut, 1988a). An ownership position inferior to 25 percent was also interpreted as a sign of limited involvement and interest in the management of the JV (Geringer, 1986; Inkpen, 1992).

Finally, this study focused on JVs in operation on January 1, 1985, and those formed since that date, but not after January 1, 1990. These parameters provided an opportunity to obtain a sample containing a mix of recently and less recently-formed JVs, as well as a sample of terminated and surviving JVs. The objective for such an approach was to limit biases toward surviving JVs. In fact, the survival and duration of JVs had been found to be correlated with subjective measures of performance such as satisfaction and business performance (Geringer and Hébert, 1991), which were used in the study. Consequently, biases toward surviving and recently-formed JVs could have reduced the observed variance of performance constructs. They could also have introduced selection biases that could have represented potential threats to the validity of the study. In turn, a mix of recently and less recently-formed JVs, and of terminated and surviving JVs, was thought to reduce these threats, and thus to enhance the validity of the study.

A listing of qualifying JVs was obtained from Statistics Canada's CALURA database, supplemented by Inter-Corporate Ownership (1990), and various newspapers, journals, trade journals, periodicals, and computerized indexes. Furthermore, of the qualifying JVs, only those involving publicly-owned firms or companies listed in public directories were included in the sample. This selection facilitated the identification of parent firms, JVs, and key informants in all organizations. It also eliminated most of the ventures involving individuals, family trusts, and other types of non-corporate partners. A total of 245 JVs were initially identified. Subsequently, all parent firms were contacted by telephone to verify the status of the organizations identified as JVs. With these telephone calls, 104 organizations initially identified as JVs were dropped, and 141 qualifying JVs were kept for study. It was believed that this number represented a reasonable approximation of the population of qualifying JVs.

Among these 141 JVs, 93, or 66 percent, had a parent firm headquartered outside Canada and thus, were considered international JVs (IJVs). Forty-eight JVs, representing 34 percent of the identified population, were domestic JVs. Fifty-six JVs (40%) had been formed before 1981, 33 (23%) between 1981 and 1985, and 52 (37%) since 1985. Eighty (57%) were still in operation as JV at the time of the study, while 61 (43%) were either no longer in operation or had ceased to be JVs. In addition, 90 JVs (64%) had a 50/50 equity split.

3. Data collection

Dillman's (1978) Total Design Method (TDM) was used to develop this

study's data collection procedures. Dillman's TDM provided precise indications and instructions regarding the development and implementation of cost-effective surveys. The selection of TDM was motivated primarily by the high response rates obtained by studies that had used this method (e.g., Barclay, 1986; Smith, 1992).

The following section describes the questionnaires used, the steps taken in the identification of key informants, and the pilot study. The remainder of the section outlines data collection procedures for parent firms and JV respondents.

The questionnaire

This study used two questionnaires, one designed for parent firm respondents and a second for JVGMs (See Appendix 1). The questionnaires had the form of a booklet made of two 11" x 17" paper sheets folded and stapled in the middle. Quality recycled paper was used for these eight page questionnaires. The front cover incorporated the University of Western Ontario logo. They contained general questions on the JV and its formation (pages 1, 2, and 3), on the division of control (pages 4 and 5), on trust, commitment, and conflict (pages 6 and 7), and on the JV's performance (page 8). In addition to field-testing of the format and of many questions by Geringer (1986) and Frayne and Geringer (forthcoming), the parent firm and JVGM questionnaires were pre-tested on Ph.D. students and faculty of the Western Business School. In addition, both questionnaires were translated into French for Quebec companies with francophone personnel. Translation was made by the author, whose mother

tongue is French. Key questions were translated back to English by a professional translator in order to verify the quality of the translation.

Identification of key informants

Two types of key informants were used in this study. First, there were parent firm managers who were, or had been until recently, directly responsible for the formation and management of the JVs. In accordance with Geringer (1986), parent firm key informants were expected to be senior or upper middle-level managers. Second, there were general managers of JVs (JVGMs). These individuals were considered the personnel best placed to describe the management and dynamics of the JVs, and thus to provide reliable and valid data for research (Geringer and Hébert, 1991).

Preliminary identification of parent firm and JV key informants was made from public directories and other published sources such as Scott's Directories (Southam Business Information and Communication Group), Financial Post's financial report cards, and the Directory of Corporate Affiliations (National Register Publishing Company). This task was facilitated by the study's focus on JVs involving firms publicly owned or listed in public directories. For parent firms, particular attention was given to the executive in charge of the operating division which was related to the qualifying JV. If a parent firm informant could not be identified properly, the name of the chief executive officer or president of the firm was used instead. In this way, a total of 423 key informants was identified for the 141 sample ventures.

Information collected from these public sources, including the names and addresses of parent firms and JVs, and the names of parent firm executives and JVGMs, were then confirmed through telephone calls to firms included in the sample. Although this task was resource- and time-consuming, it permitted precise identification of the appropriate key informants for further contact. It also allowed for more efficient data collection, by reducing the number of returns due to errors in addresses, names, and firms. The names of 406 potential key informants, including 135 JVGMs and 271 parent firm managers, were confirmed or identified through this process. Among parent firm managers, 111 were from firms headquartered outside Canada, while 160 were from Canadian companies. Seventeen key informants (6 JVGMs and 11 parent firm managers) who could not be located were not included in the final list. Typically, these informants were deceased, had changed companies, or their company had disappeared.

Pilot study

A pilot study was conducted during the summer of 1991 to assess the data collection instruments and procedures. A random sample of ten JVs and their parent firms in the Southwestern Ontario and Quebec areas was drawn from the sampling frame described earlier. Key informants in these firms (7 JVs still in operation, 3 terminated JVs, and 20 parent firms) were solicited by mail for in-person interviews. Eight JVGMs (6 from JVs in operation, 2 from terminated JVs) and twelve parent firm respondents agreed to participate. These individuals were sent a questionnaire and asked to complete it before they were interviewed. Semi-structured interviews of approximately two hours each

followed. Participation from multiple informants was possible in only three parent firms.

Key informants were asked for comments on the data collection approach, the questionnaire structure and content, and the interview format. They confirmed that decisions regarding JVs were made by a limited number of senior executives and that ensuring cooperation from multiple respondents would be difficult without necessarily providing greater insights. Their comments implicitly supported the use of a single key informant strategy for this study.

Key informants also suggested minor changes to the questionnaires. Some questions as well as selected items used on some scales were deleted. The final version of the questionnaire was thus shorter. These changes did not involve the scales used for research variables, and all the items and scales used in the final version of the questionnaire could be found in its pilot version. In addition, since the final questionnaire was only marginally different from the initial questionnaire and a random sample was used, data from the pilot study were included with data from the main sample. Nevertheless, different tests were carried to examine possible differences between the pilot sample and the main samples and thus, to determine if including the pilot phase data was methodologically acceptable. Results from these statistical analyses failed to indicate any significant differences between the two sub-samples (See section 4, in this chapter).

Data collection procedures

Data collection was done in two phases. In the first phase, a mail survey was executed with a random sample of 20 JVs (20 JVGMs and 40 parent firm informants). In February 1992, the 60 pre-identified key informants were sent, by courier, a package containing a cover letter, one copy of the questionnaire, and a self-addressed return envelope. Based on Dillman (1978), the letter addressed five main issues: (1) the importance and objectives of the study; (2) the importance for the success of the study of obtaining the key informant's participation; (3) an offer to send a summary of the results in return for the informant's participation; (4) a guarantee of the confidentiality of the responses; and (5) instructions regarding the completion of the questionnaire. Three weeks later, only six completed questionnaires had been received. Follow-up letters resulted in receiving two other questionnaires.

The low response rate associated with the mail survey (approximately 13.3%) underscored the limits of survey methodologies, even sophisticated ones, in which targeted respondents are senior managers. This outcome was also consistent with similar research efforts on JVs (e.g., Tomlinson, 1970; Parkhe, 1992). Therefore, a decision was made to modify the data collection approach in the second phase of data collection.

Specifically, in the second phase, groups of approximately 30 key informants were sent, by Canada Post special delivery, a letter soliciting their cooperation in the research project. This letter was similar to the one used in the

first phase, but included neither instructions regarding a questionnaire nor a questionnaire. The letter informed each informant that his/her cooperation could involve either the completion of a questionnaire or an in-person interview. One week later, each informant was contacted by telephone to secure his/her cooperation or to be referred to the correct individual. The latter individual was also contacted by telephone. Following agreement to participate in the study, a questionnaire and a self-addressed return envelope were mailed to the informant. Some respondents required up to five telephone calls. Follow-up mailings were also made when questionnaires were lost or forgotten. These mailings included a letter restating the respondent's importance to the study and the study's importance and a replacement questionnaire. Telephone calls to key informants also made a survey of non-respondents possible.

This approach was used for all pre-identified informants of the 141 qualifying JVs, excluding those contacted for the pilot study and who had responded in the first phase. Data collection lasted six months, from March to August 1992. A total of 101 questionnaires was received by mail. In addition, 29 in-person interviews were conducted for respondents who were reluctant to answer the questionnaire in writing or over the telephone. The interviews were semi-structured and organized around the questionnaire. Informants were asked to complete the questionnaire before the interview. For resource and logistical reasons, in-person interviews were performed only for firms located in the Windsor-Quebec City corridor in the provinces of Quebec and Ontario. For 25 key informants who had agreed to participate, but refused to complete the questionnaire, and for whom in-person interviews were impossible, telephone

interviews were conducted. In these cases, the interview format was similar to in-person interviews.

4. Responses and non-respondents

A total of 175 questionnaires was received from respondents. Two incomplete questionnaires were rejected. Consequently, 173 questionnaires, from as many respondents, were considered useable for the study. With an estimated total of 406 potential pre-identified and located respondents, data collection from 173 respondents represented an overall response rate of 42.6 percent. Response rate was only slightly higher for JVGMs, at 45.2 percent (61 respondents out of a total of 135), compared to 41.3 percent for parent firm managers (112 out of a total of 271). In turn, response rate was higher for parent informants from Canadian companies (45.6%) than from those headquartered outside Canada (35.1%). Telephone calls made a survey of non-respondents possible, as well as the identification of the motives for not participating in the study. Approximately 52 percent of the non-respondents invoked the confidentiality of the topic as the rationale for declining participation. Other non-respondents simply expressed no interest in the study. Furthermore, 12 key informants explained that several studies on JVs had been conducted in recent years and that they could not participate in all of them.

As a result, data were obtained from at least one source for 93 of the 141 pre-identified JVs (66.0%) comprising the study's sampling frame. Among these, data were collected from multiple sources for 62 JVs (44.0%). Specifically,

responses were obtained from one parent firm informant and the JVGM for 27 JVs, from informants from both parent firms for 17 JVs, and from informants from both parents and from the JVGM for 18 JVs. In turn, 16 and 15 JVs had data only from one parent informant and from the JVGM, respectively. While this response rate might have been lower than some prior interview-based and clinical studies, the resulting sample size is believed to be one of the largest in comparison to other studies with multiple-source data collection approaches.

Assessment of sample characteristics and biases

Differences tests were carried out to explore possible differences between the pilot phase random sub-sample and the survey sub-sample, and thus to determine whether the two sub-samples could be combined for hypothesis testing. The same tests were conducted to examine differences between the overall sample and the population of qualifying JVs. *A priori*, no differences were expected in either case. Indeed, the pilot study sample had been randomly drawn. Moreover, the entire population of qualifying JVs was surveyed. Thus, the study had characteristics of a census, and did not simply rely on a sample drawn from a larger population.

Nevertheless, *t*-tests were used to examine differences in means along the following dimensions, for which population data were available: period of formation (FORM), and the proportion of international JVs (IJV), 50/50 JVs (50/50), and surviving IVs (SURV). The period of formation variable was coded according to the three time-period categories available for the studied population:

JVs formed before 1981, between 1981 and 1985, and since 1985. Furthermore, using multivariate analysis of variance (MANOVA), Cochran's C statistic and Hotelling's T^2 were computed to test the homogeneity of variance and the equality of multivariate means, respectively, along these dimensions.

All results showed that there were no significant differences between the pilot and survey sub-samples (See Table 5-1). Significance levels (p) for t -tests, Cochran's C and Hotelling T^2 were well above 0.2. These results provided strong support to the inference that the samples were drawn from the same population. Therefore, it appeared methodologically valid to combine the two samples.

Furthermore, the sample and the population showed similar demographic profiles in terms of period of formation, and the proportion of IJV, 50/50 JVs, and JVs still in operation. For instance, JVs formed before 1981 accounted for 43 percent of the sample JVs, compared to 40 percent in the identified population. IJVs were also found to be of similar proportion in the sample (75%) compared to the population (66%). This was also the case for 50/50 JVs which accounted for 67 percent of the sample JVs, compared to 64 percent in the population. Finally, 61 percent of the sample population was still in operation, compared to 57 percent in the population. Results from statistical analyses confirmed this contention. For all analyses, there were no significant differences between the overall sample and the population (See Table 5-1). These statistical results were interpreted as providing further evidence that the study's sample did not embody significant biases compared to the studied population of JVs. Consequently, the sample was judged to be representative of this population.

TABLE 5-1
Assessment of sub-samples and sample characteristics
T test, Cochran's *C* and Hotelling's T^2

| | <u>Pilot sub-sample vs. Survey sub-sample</u> | | | | | <u>Sample vs Population</u> | | | | |
|-------|---|---|-----|-------------------------------------|------------|-----------------------------|---|-----|-------------------------------------|-----|
| | <i>T</i> -test <i>p</i> | Cochran's <i>C</i> <i>C</i> <i>p</i> | | Hotelling's T^2 T^2 <i>p</i> | | <i>T</i> -test <i>p</i> | Cochran's <i>C</i> <i>C</i> <i>p</i> | | Hotelling's T^2 T^2 <i>p</i> | |
| FORM | .07 | .55 | .52 | | | .67 | .50 | .96 | | |
| IJV | .25 | .57 | .37 | | | .45 | .51 | .83 | | |
| 50/50 | .62 | .52 | .78 | | .07 .22 | .19 | .53 | .54 | .01 | .82 |
| SURV | .28 | .54 | .53 | | | .69 | .51 | .82 | | |

5. Operationalization and measurement of constructs

This study relied on Likert-type five-point scales for the measurement of constructs. The division of control, as well as the relationship and performance constructs, were all measured with such scales.

Several reasons motivated the use of Likert-type five-point scales. In the context of studies of JVs, ordinal classification of perceptions had been suggested as a more realistic task for respondents than the use of interval or ratio level measures (Geringer, 1986; Blumenthal, 1988). Compared to other scales, Likert-type scales are also simpler and quicker to answer (Kidder and Judd, 1986). These characteristics of Likert-type scales appeared especially important given the limited available time of senior executives. In addition, five-point scales were judged to provide sufficient precision in data. They have also

been suggested as exhibiting reliability equivalent to the reliability of seven-point scales often used in social sciences research (Master , 1974). For these reasons, the scales were believed to be effective and appropriate instruments for the measurement of the study's constructs.

Furthermore, the study's multiple source data collection approach was taken into consideration in the development of the different scales. This approach made it necessary to adapt questions, items, and response scales for use by parent firm informants and JVGMs (Geringer and Hébert, 1991). Finally, the multiple source approach raised the issue of the method of aggregation to use in order to obtain mutual constructs and to aggregate responses. The selection of an aggregation method is discussed later in this chapter, in the data analysis section.

In the remainder of this section, the measurement of the constructs of control sharing, autonomy, trust, commitment, conflict, satisfaction, and business performance is examined. This section concludes with a discussion of the reliability and validity of the constructs used in the research.

Division of control: Control sharing

Control sharing was measured with a scale similar to the one used in Geringer (1986) and Geringer and Hébert (1992), itself an adapted version of the

multi-item scales used by Killing (1982, 1983), Schaan (1983), and Beamish (1984). This scale measured the extent of control sharing between parent firms along 18 categories of decisions and/or activities covering components of Porter's (1985) value chain. The categories included the following:

- CTRGM: Hiring and firing of the JVGM
- CTRMGT: Hiring and firing of the JV's senior managers
- CTRFIN: Obtaining financing for the JV
- CTRDAY: Day-to-day management of the JV
- CTRK: Determining major capital expenditures
- CTRCOST: Costs control
- CTRPROD: Technology and engineering of the product
- CTRLOC: Location of the JV's facilities
- CTRRAW: Sourcing of raw materials and components
- CTRPTNT: Patents, licenses and trademarks
- CTRMFG: Manufacturing
- CTRPROC: Process technology
- CTRRD: Research and development
- CTRHFT: Hiring and firing of technical employees
- CTRHFNT: Hiring and firing of non-technical employees
- CTRPRIC: Pricing
- CTRMKT: Marketing and sales
- CTRDIST: Distribution

For these items, respondents were asked to assess the extent of control sharing at the time of the JV's formation and for the JV's most recent year of operation. However, only the control sharing at the time of the JV's formation was used in the study. The following question was used in the parent firm questionnaire: "When the JV was first established and in its most recent/last year of operation, how was control over each of the following decisions allocated between your firm and your partner?" The response scale was a Likert-type 5-point scale where 1 was related to "Your firm controls," 3 to "Shared control between your firm and your partner," and 5 to "Your partner controls." In turn, for

the same items, JVGMs were asked to indicate a 1 if "*Parent 1 controls*," a 5 if "*Parent 2 controls*," or a 3 if "*Both parents share control*."

Division of control: Autonomy

Autonomy was measured with a scale similar to the one used for control sharing. This scale assessed the extent of autonomy along the same activities and decisions, except for the hiring/firing of the JVGM which was not included since this decision was typically under parent firms' responsibility:

- AUTMGT: Hiring and firing of the JV's senior managers
- AUTFIN: Obtaining financing for the JV
- AUTDAY: Day-to-day management of the JV
- AUTK: Determining major capital expenditures
- AUTCOST: Costs control
- AUTPROD: Technology and engineering of the product
- AUTLOC: Location of the JV's facilities
- AUTRAW: Sourcing of raw materials and components
- AUTPTNT: Patents, licenses and trademarks
- AUTMFG: Manufacturing
- AUTPROC: Process technology
- AUTRD: Research and development
- AUTHFT: Hiring and firing of technical employees
- AUTHFNT: Hiring and firing of non-technical employees
- AUTPRIC: Pricing
- AUTMKT: Marketing and sales
- AUTDIST: Distribution

In the parent firm and the JVGM questionnaire, the following question was used: "When the venture was established and in its most recent year of operation, how was control over each of the following decisions allocated between JV managers and the parent firms?". In the Likert-type 5-point response scale, 1 referred to "*Decided totally by JV managers*," 3 to "*Shared equally by*

parent and JV managers," and 5 to "Decided totally by parent managers."

Trust

Trust was defined as a parent firm's belief that its partner was ready to perform actions that would result in positive outcomes for the firm and the JV. Thus, trust was considered a cognitive belief. Consistent with this definition, trust was measured with a Likert-type three-item scale adapted from Anderson and Weitz (1989) and Anderson and Narus (1990). Parent firm managers were asked to indicate their agreement or disagreement (-2 = *Strongly disagree*, 0 = *Neither disagree nor agree*, +2 = *Strongly agree*) with the following statements:

- TR1: My firm has to watch everything our partner does in the JV. (-)
- TR2: My firm has a high degree of trust in this partner.
- TR3: Our partner is a company that stands by its word.

The first of these items was a reverse statement (-) which was recoded for data analysis. Mutual trust was obtained from the aggregation of the parent firms' responses regarding the items of the individual trust construct. JVGMs were also asked to assess mutual trust through a single-item scale ("There is a high degree of mutual trust between parent firms") using the same five-point response scale.

Commitment

Commitment was defined as the degree to which a parent firm felt bound to the stability and success of a JV. As discussed above, and building from

Beamish (1984), commitment was conceptualized along three dimensions: commitment to the JV in general, commitment to the partner, and commitment to the success of the JV. Within this perspective, commitment was measured by a six-item scale, with two items for each of the dimensions, adapted from Anderson and Weitz (1992). For instance, the items "We are not committed to this supplier" and "Our relationship with this supplier is a long-term alliance" used in Anderson and Weitz (1992) became "My firm is not committed to this JV" and "Our JV with this partner is a long-term alliance."

This commitment scale focused on the belief or attitude nature of commitment, rather than on the specialized investments leading to commitment, as in Subieta (1991). Specifically, using the same response scale as for trust, parent firm respondents were asked to indicate their agreement or disagreement along six statements, among which three were reversed (-). These statements are as follows:

- COM1: My firm is not committed to this JV. (-)
- COM2: Our JV with this partner is a long term alliance.
- COM3: My firm is continually looking for another partner to replace the current one. (-)
- COM4: If another company would offer to form a JV, my firm would accept, even if it meant dropping this partner. (-)
- COM5: My firm is willing to dedicate whatever people and resources it takes to make this JV a success.
- COM6: My firm wants to be patient and to make this JV work.

Mutual commitment was obtained through the aggregation of the parent firms' responses on the statements of individual commitment. Parents' individual commitment and mutual commitment were also assessed by the JVGM with

single-item scales ["Parent 1 is not committed to the JV" (-) and "Parent 2 is not committed to the JV" (-)]. The response scale was the same as the one used for the construct of trust.

Conflict

Consistent with the approach followed in research on vertical inter-organizational relationships (e.g., Brown and Day, 1981) and in JVs (e.g., Habib, 1983; Tillman, 1990), this study's focus was on manifest conflict. This construct was measured with an eight-item scale adapted from Habib (1987). Items were selected from Habib's instrument following discussion with key informants during the pilot study phase. They were phrased to correspond to the main group of activities within Porter's (1985) value chain and with items used in the scale of the division of control variable. Respondents were asked to assess the frequency of conflict with the partner firm on a Likert-type five-point response scale (5 = *Constantly*, 1 = *Never*) along the following dimensions:

- CONF1: The objectives of the JV.
- CONF2: The general management of the JV.
- CONF3: The research and development of the JV.
- CONF4: The relative control of each parent over the JV.
- CONF5: The manufacturing of the JV.
- CONF6: The technology of the JV.
- CONF7: The capital expenditures of the JV.
- CONF8: The marketing of the JV.

Using the same scale, conflict was also assessed by JVGMs. The aggregations of responses from multiple sources, i.e., from parent firms and/or JVGMs, permitted mutual assessments of conflict to be obtained.

JV performance

In this study, two constructs were used to evaluate JV performance: parent firms' satisfaction and business performance.

Parent firms' satisfaction

The earlier discussion of prior research highlighted the importance of satisfaction as a performance outcome in inter-organizational relationships (e.g., Anderson and Narus, 1990). Parent firms' satisfaction was defined as a parent's positive affective state resulting from the appraisal of the JV. In addition, the review of prior research identified three key dimensions of parent firm's satisfaction: satisfaction with the JV in general, satisfaction with the performance of the JV, and satisfaction with the relationship between parent firms. Therefore, it was believed that a reliable and valid assessment of a parent firm's satisfaction required consideration of each of these dimensions.

As a result, parent firm respondents were asked to evaluate their satisfaction with the JV (SAJV), with its performance (SAPE), and with the relationship between the partners (SARL). Furthermore, parent firm respondents were asked to assess their partner's satisfaction along the same three items. The question "How satisfied have your firm and your partner been with the following aspects of the JV?" was used. The response scale was a Likert-type five-point scale where 1 referred to "Very dissatisfied," 3 to "Neither dissatisfied nor satisfied," and 5 to "Very satisfied." This scale was adapted from Geringer

and Hébert (1991), itself an adapted version of the scale used by Killing (1983), Schaan (1983), and Beamish (1984). With a similar question, "How have Parent 1 and Parent 2 been satisfied with the following aspects of the JV?", JVGMs assessed parent firms' satisfaction along the same three items.

Regarding mutual satisfaction, two approaches were used. In the first one, mutual satisfaction was the result of the aggregation of the multiple sources' responses along the three dimensions of satisfaction. The second approach involved a scale directly assessing mutual satisfaction along the same three dimensions. This scale was derived from Anderson and Narus' (1984, 1990) scale of mutual satisfaction and adapted to the context of JVs. Parent firm respondents indicated their agreement or disagreement with the three following statements:

- MSAJV: My firm and our partner are very contented with all aspects of the JV.
- MSAPE: My firm and our partner are very contented with the performance of the JV.
- MSARL: My firm and our partner are very contented with the relationship existing between them.

The same scale was used for a JVGM's assessment of the parents' mutual satisfaction. The three statements were reworded accordingly ("Both parents are very contented with..."). For the parent and JVGM's mutual satisfaction scale, the response scale was a "*Strongly disagree-Strongly agree*" five-point scale identical to the one used for trust and commitment.

Business performance

This construct was defined earlier as the extent to which a JV had achieved the expectations of a parent firm at the time of the JV's formation. It was measured with a multi-item scale derived from the ones proposed by Schaan (1983) and used by Geringer and Hébert (1991). This scale also represented an expanded version of the instrument used in Roos (1989) and Koh and Venkatraman (1991). Parent firm respondents and JVGMs were asked to "rate the joint venture's actual performance versus initial expectations" along 12 dimensions of performance and one item of overall performance. These dimensions included the following:

- SALES: Level of sales
- SHARE: Market share
- PROF: Profitability
- COSTS: Costs
- MGTJV: Management of the venture
- RD: Research and development
- PRODT: Technology and engineering of the product
- PROCT: Process technology
- MFG: Manufacturing
- RAW: Raw materials and components
- MKTG: Marketing
- DIST: Distribution
- POVER: Overall performance

These items were selected and worded in order to correspond to items used in the control sharing, autonomy and conflict scales. On the Likert-type five-point response scale, 1 referred to "*Much below initial expectations*", 3 to "*About equal to initial expectations*", and 5 to "*Much above initial expectations*". A mutual assessment of JV performance was obtained by the aggregation of

multiple sources' responses.

As a complement, two objective measures of performance were used. The survival of the venture was measured dichotomously (0 = No; 1 = Yes), while its duration was measured in years. These objective measures were selected since they were found to be highly correlated with perceptual assessments of satisfaction and performance (Geringer and Hébert, 1991).

6. Editing and analysis of data

All collected data were entered manually into SPSS^{*} datafiles using a word processor software as editor. Frequency analyses and visual inspection were performed to identify input and coding errors. Reverse items were also recoded. These procedures revealed that data collected included a sizeable number of missing data points. As a result, when appropriate, missing data were handled with a substitution method which is described below. Furthermore, data collection from multiple sources and estimation of mutual/aggregated constructs required the selection of an aggregation method. This issue is also discussed further in this section. Finally, this section concludes by addressing the statistical techniques used in this study.

The treatment of missing data

While casewise deletion is the most frequently used treatment of missing data, with paired or multiple-source data as was the case in this study, pairwise

deletion is typically used. However, the use of casewise deletion may result in important losses of information and reduce a study's response rate. Furthermore, pairwise deletion is not random and can create biases in the data (Warwick and Lininger, 1975). As a result, this approach to the treatment of missing data would have affected the validity and generalizability of the study's results. For these reasons, in this study, missing data were handled with a substitution approach adapted from Barclay (1986). Among the different substitution methods available (e.g., Warwick and Lininger, 1975), this approach appeared to be the most appropriate. The main advantage of this substitution method is its use of information unique to a case or a relationship before more general information. It is also thought to minimize the impact of substituted values on the mean and variance of the scales and items where substitution was performed, and therefore, to minimize the risk of impairing the quality of the data.

Analyses and visual inspection revealed that out of 175 questionnaires received, 41 survey questionnaires contained missing data regarding the division of control, 26 regarding business performance, 4 regarding individual satisfaction, 3 regarding conflict, and none regarding trust, commitment, and mutual satisfaction. The higher proportion of missing data for division of control and business performance could be explained by the fact that not all JVs were involved in the activities listed in the scales measuring these two variables. For instance, not all JVs performed activities related to R&D or distribution. Such cases typically resulted in missing responses for these items. Therefore, the substitution approach used in the study entailed two options. The first substitution option involved missing data in a scale being replaced by the mean

of the remaining items composing the scale. This option, which relied on information unique to the case, was used when a clear pattern was observable in the responses in a given scale. For example, in a scale where all available answers were of a given value, the missing data points were replaced with the same value. When this option was not feasible, missing values were then substituted, when available, for partner firms' or JVGMs' response for the same item. This second option involved information unique to the relationship. In the case of divergence between partner firm's and JVGM's responses, or if this second option was not possible, missing values were substituted for the mean value of the items across all cases in the sample. Finally, cases where scales had more than half their values missing were considered unusable for the study. This criteria resulted in two questionnaires being dropped.

This substitution method, where missing data were substituted by another respondent's responses, is consistent with Barclay (1986) and supported by Geringer and Hébert (1991). Indeed, in the context of developed country JVs, Geringer and Hébert (1991) demonstrated that there was a high degree of within-firm and between-firm inter-rater reliability in JVs. Particularly, they showed that evaluations of a JV's business performance by each of the parent firms and the JVGM were highly correlated. Similarly, significant congruence was found between a parent firm's satisfaction and its partner's evaluation of its satisfaction. The same results were obtained for the evaluation of the parent firms' respective satisfaction by the JVGM. To explain these results, Geringer and Hébert (1991) suggested that since JVs were organizations in which ownership and decision making were shared, an informant from one source (a parent firm manager or

the JVGM) of the venture should evidence at least some degree of awareness or information regarding the other sources elements' (parents or JVGM) satisfaction and assessment of performance.

The perceptual convergence, or consistency, among sources for each of the scales used in this study was also assessed statistically before going forward with the substitution method. Correlation coefficients significant at the 0.05 level were found between parent firms' assessments for 14 out of the 18 items of the division of control scale, for 11 out of the 13 items of the business performance scale, and for all items of the conflict and individual satisfaction scales. Two other items of each of the division of control and the business performance scales exhibited correlations significant at the 0.10 level. In turn, significant correlations (at the 0.05 level) were found between parent firms' and JVGMs' assessments of control (24 out of 34 items), business performance (22 out of 26 items), conflict (9 out of 16 items), and individual satisfaction (6 out of 6). Correlations significant at the 0.10 level were also observed for five items of the control scale, two items of the business performance scale, and five items of the conflict scale.

In addition, oneway analyses of variance were used to compute Shrout and Fleiss' (1979) Case-1 intraclass correlation coefficient in order to assess further the extent of convergence among sources. This assessment again supported the consistency among parent firms' and JVGMs' responses, and related results are presented and discussed in Chapter 6. In sum, these analyses, as well as Geringer and Hébert's (1991) conclusions, supported the

substitution of missing points with responses from another source, when necessary. By extension, they also supported the proposed substitution method

Method of aggregation of data

Mutual assessments of the study's constructs were obtained by the aggregation of multiple sources' responses. Although different aggregation methods were available, the methods and rules of aggregation of data have received very limited attention. With the exception of Smith (1992), scholars who devoted some attention to the issue (e.g., McNemar, 1969; Hannon, 1971; Thompson and Walker, 1982) have most often limited themselves to identifying and describing the different methods available without providing much indication on their use and their respective advantages and disadvantages. Globally, two main types of methods are available, traditional empirical methods and conceptual ones.

Traditional empirical methods can be linear or non-linear. Linear methods, most often found in the literature include calculations of sums and averages. Non-linear methods refer, among others, to ratios, products, and correlations. However, these linear and non-linear methods often exhibit poor reliability and other statistical anomalies. The best example of these problems is given by the mean as a method of aggregation: if the mean is used, the aggregate score of the answers (1,5) will be the same as (3,3). A promising non-linear method is the square root of the product of the two responses. With this approach, the original metric of a scale is maintained, thus easing interpretation.

Furthermore, this method of aggregation may be more effective and reliable when divergent answers are expected. Indeed, with this method, the aggregation of the answers (1,5), i.e., 2.2, is inferior to the score obtained for (3,3), i.e., 3. Following the same rationale, in the case of three responses to aggregate, the cubic root of the product of the three responses can be used.

In turn, conceptual methods essentially involve the assignment of a rank to sets of responses. With this method, sets of responses such as (1,2) and (1,1) could be assigned a rank of 1, compared to a rank of 3 for (3,3) and (3,4). However, as we can see, cases with significantly divergent responses (such as 1 and 5) can be difficult to interpret with such an approach. In a variant of this method, ranks are assigned by a panel of judges. Furthermore, methods can be combined. For example, ranks can be assigned according to the square root of the product of two responses.

To our knowledge, Smith (1992) was the only study that provided a prescriptive indication regarding the selection of an aggregation method. In a study on horizontal selling alliances, Smith compared the reliability and validity of the different methods outlined above. Using Partial Least Squares (PLS) as an analytical tool, Smith recommended utilization of the square root approach since it was the least arbitrary, and produced consistent and reliable results. These conclusions were considered especially relevant for this research since Smith's (1992) study examined constructs such as mutual trust and mutual satisfaction. As a result, the square root method was selected as this research's aggregation approach. Nevertheless, before using this aggregation method, the

perceptual convergence among different sources was tested. Furthermore, the reliability and normality of aggregated data was examined before proceeding with any hypothesis testing. The square root aggregation method was also contrasted and compared to an alternative method, the average of the responses. Results from these analyses are discussed in Chapter 6.

Statistical techniques

SPSS^x was used for all statistical analyses in the study. As a first step, data were checked visually as well as through FREQUENCIES programs for errors and accuracy. The substitution approach discussed earlier was also implemented. Characteristics of the studied population and the study's sample were examined with *T*-tests and multivariate analyses of variance (MANOVA) to identify differences and possible biases in data.

Second, the reliability and consistency of the scales were assessed with Cronbach's alpha (Cronbach, 1951) and factor analysis, respectively. Reliability was evaluated against Nunnally's (1967) criteria of 0.7, while items with factor loadings lower than 0.5 on a single factor were dropped. Validity of the constructs was examined with inter-item correlation matrices. Confirmatory factor analyses were also conducted to evaluate the convergent and discriminant validity of the constructs. Similar assessments of reliability and consistency were carried out for aggregated constructs, once perceptual convergence among sources was established with oneway analyses of variance (ONEWAY).

Third, for hypothesis testing, Ordinary Least Squares (OLS) regression analyses were used. In these analyses, factor scores were used to estimate multi-item constructs. OLS regression appeared an adequate tool for examining relationships between control sharing, JV performance, and relationship dynamics, for this study's purpose and scope. Since some of the study's constructs had not been frequently examined and tested in prior research, this statistical method was used. Indeed, some of the study's scales were not considered to have enough empirical support in the context of JVs for a causal modelling technique such as PLS to be used, even though PLS' basic assumptions (i.e., nominal data, and independence and normality of residuals) are the same as OLS regression (Barclay, 1987). Furthermore, PLS would have generated similar results to OLS regression, since coefficients obtained from each technique are generally equal or very close in magnitude.

Therefore, OLS regression was used in to examine relationships linking control sharing and autonomy with JV performance and relationship dynamics, as well as to assess the relationships between relationship dynamics variables and JV performance. Moderated OLS regression analyses were conducted to test the moderating effect of the international versus domestic nature of JVs.

Finally, in this study, results significant at the 0.05 level were required to provide empirical support to an hypothesis. Otherwise, results were not considered statistically significant.

CHAPTER 6

CONSTRUCT VALIDITY AND PRELIMINARY DATA ANALYSIS

This chapter reports results from preliminary analyses investigating issues of construct validity and the study's approach to data analysis. In particular, the reliability, consistency, and validity of the constructs composing the research model are discussed. The perceptual consistency of respondents and the aggregation method used in the study are also addressed. As discussed in the chapter's last section, these analyses resulted in modifications to the research model.

1. Reliability and validity of constructs

Efforts were made to assess the reliability and validity of the study's constructs. The approach was heavily guided by Churchill's (1979) suggested procedure for developing constructs. Investigation of the reliability and consistency as well as of the convergent, discriminant, and nomological validity of the constructs is presented and discussed below. Initial analyses focused on individual data and were followed by the examination of aggregated data.

Consistency and reliability

The consistency and reliability of the study's construct were assessed with Cronbach's alpha and exploratory principal-component factor analysis. For multidimensional constructs, varimax rotation was used. An eigenvalue greater than 1 was the criterion used for factor extraction. Consistent with Churchill (1979), analyses were performed to purify measures. The approach was deliberately conservative, involved some iterations, and had as an objective the development of highly consistent and reliable measures. As a decision rule, items with factor loadings lower than 0.5 or with substantial loadings on more than one factor were dropped. The 0.5 loading criteria corresponded to a large correlation in Cohen's (1977) definitions of levels of effect size.

In the case of the control sharing and autonomy scales, factor analysis extracted three orthogonal constructs accounting for 78.3% and 72.7% of total variance, respectively (See Table 6-1). The first control factor, labelled operational control, included nine decision areas of an operational nature: hiring and firing technical, non-technical, and management personnel (CTRHFT, CTRHFNT and CTRMGT); pricing (CTRPRIC); distribution (CTRDIST); marketing (CTRMKT); day-to-day management (CTRDAY); costs control (CTRCOST); and manufacturing (CTRMFG). The second factor, labelled technological control, involved control over four technology-related decisions or activities: patents and trademarks (CTRPTNT); process and product technology

(CTRPROC and CTRPROD); and R&D (CTR RD). The third factor, labelled strategic control, was related to control over four strategic-level decisions: financing of the JV (CTRFIN); capital expenditures (CTRK); nomination of the JVGM (CTRGM); and location of the JV (CTRLOC). The same dimensions were identified for the autonomy scale, the only difference being the absence of the nomination of the JVGM in the strategic autonomy construct. Cronbach's alphas for control and autonomy constructs were above 0.7 (See Table 6-2). In both scales, the item raw materials and components was eliminated from further analysis because of high loadings on more than one factor.

Constructs of trust, commitment, individual satisfaction, and mutual satisfaction were found to be both unidimensional and reliable. One low-reliability and poorly consistent item in each of the trust scale (TR1) and the commitment scale (COM4) were dropped. In the case of conflict, items related to the objectives of the JV (CONF1), the R&D of the JV (CONF3), and the technology of the JV (CONF5) were eliminated because of their low factor loadings. No items were dropped in the individual and mutual satisfaction scales.

Finally, factor analyses identified two business performance constructs. Nevertheless, for face validity reasons, business performance was treated as a single dimension construct. Three items — costs, R&D, and raw materials and components — were dropped from further analysis because of low factor loadings.

TABLE 6-1
Results from factor analysis: Individual data
Varimax rotation

| Constructs | Items | Factor 1 | Factor 2 | Factor 3 | Eigenvalue | % of variance |
|------------------------|---------|----------|----------|----------|------------|---------------|
| Operational Control | CTRHFT | 0.8561 | | | 8.20 | 48.3 |
| | CTRFNT | 0.8260 | | | | |
| | CTRPRIC | 0.7821 | | | | |
| | CTRDIST | 0.7677 | | | | |
| | CTRMKT | 0.7616 | | | | |
| | CTRDAY | 0.6517 | | | | |
| | CTRMGT | 0.6283 | | | | |
| | CTRCOST | 0.6218 | | | | |
| | CTRMFG | 0.5739 | | | | |
| Technological Control | CTRPTNT | | 0.7545 | | 1.80 | 10.6 |
| | CTRPROC | | 0.7198 | | | |
| | CTRPROD | | 0.7005 | | | |
| | CTRRD | | 0.6991 | | | |
| Strategic Control | CTRFIN | | | 0.7837 | 1.21 | 7.1 |
| | CTRK | | | 0.7526 | | |
| | CTRGM | | | 0.7293 | | |
| | CTRLOC | | | 0.6792 | | |
| Operational Autonomy | AUTHFNT | 0.9007 | | | 8.38 | 52.4 |
| | AUTHFT | 0.8557 | | | | |
| | AUTCOST | 0.8078 | | | | |
| | AUTDAY | 0.7973 | | | | |
| | AUTMFG | 0.7942 | | | | |
| | AUTPRIC | 0.7000 | | | | |
| | AUTDIST | 0.6963 | | | | |
| | AUTMKT | 0.6740 | | | | |
| AUTMGT | 0.5582 | | | | | |
| Technological Autonomy | AUTRD | | 0.8582 | | 1.93 | 12.0 |
| | AUTPTNT | | 0.8506 | | | |
| | AUTPROD | | 0.7634 | | | |
| | AUTPROC | | 0.7144 | | | |
| Strategic Autonomy | AUTFIN | | | 0.7591 | 1.49 | 9.3 |
| | AUTLOC | | | 0.7348 | | |
| | AUTK | | | 0.7235 | | |
| Trust | TR3 | 0.8952 | | | 1.60 | 80.1 |
| | TR2 | 0.8952 | | | | |
| Commitment | COM2 | 0.7530 | | | 2.35 | 40.7 |
| | COM6 | 0.7042 | | | | |
| | COM5 | 0.7017 | | | | |
| | COM3 | 0.6417 | | | | |
| | COM1 | 0.6194 | | | | |

TABLE 6-1 Con't.

| Constructs | Items | Factor 1 | Factor 2 | Factor 3 | Eigenvalue | % of variance |
|----------------------|-------|----------|----------|----------|------------|---------------|
| Conflict | CONF2 | 0.8097 | | | 2.53 | 63.5 |
| | CONF5 | 0.7869 | | | | |
| | CONF4 | 0.7751 | | | | |
| | CONF8 | 0.7489 | | | | |
| | CONF7 | 0.6930 | | | | |
| Satisfaction | SAJV | 0.9449 | | | 2.41 | 80.6 |
| | SAPE | 0.9036 | | | | |
| | SARL | 0.8424 | | | | |
| Mutual Satisfaction | MSAJV | 0.9464 | | | 2.48 | 82.6 |
| | MSARL | 0.8935 | | | | |
| | MSAPE | 0.8862 | | | | |
| Business Performance | POVER | 0.6813 | | | 5.92 | 59.2 |
| | MFG | 0.8215 | | | | |
| | SALES | 0.8135 | | | | |
| | SHARE | 0.8074 | | | | |
| | PROF | 0.7578 | | | | |
| | MKT | 0.7443 | | | | |
| | PROCT | 0.7397 | | | | |
| | MGTJV | 0.7150 | | | | |
| | DIST | 0.7107 | | | | |
| | PRODT | 0.7081 | | | | |

Convergent, discriminant, and nomological validity

Analyses were also conducted to assess the convergent, discriminant, and nomological validity of this study's constructs. Convergent validity was defined as the degree to which attempts to measure the same constructs through maximally different methods are in agreement (Campbell and Fiske, 1959). Discriminant validity is the extent to which a construct can be differentiated from other constructs (Kidder and Judd, 1986). It is determined by the extent to which a measure does not correlate highly with another measure of a different construct. Finally, nomological validity refers to an observed relationship between

TABLE 6-2
Cronbach's alpha: Individual constructs

| | Number of scale items | Cronbach's Alpha |
|------------------------|--------------------------|---------------------|
| Operational control | 9 | 0.93 |
| Technological control | 4 | 0.80 |
| Strategic control | 4 | 0.76 |
| Operational autonomy | 9 | 0.93 |
| Technological autonomy | 4 | 0.85 |
| Strategic autonomy | 3 | 0.77 |
| Trust | 2 | 0.74 |
| Commitment | 5 | 0.71 |
| Conflict | 5 | 0.81 |
| Satisfaction | 3 | 0.88 |
| Mutual satisfaction | 3 | 0.90 |
| Business performance | 10 | 0.86 |

measures of theoretically related constructs (Peter, 1981). In practical terms, the nomological validity of two constructs is assumed to be supported if the relationship between them, as suggested by theory, is observed.

Convergent and discriminant validity

In an attempt to assess convergent and discriminant validity, an inter-item correlation matrix of all of the constructs was produced. Derived from Campbell and Fiske's (1959) multi-trait multi-method matrix, this matrix allows an assessment of convergent and discriminant validity by comparing within-construct and between-construct inter-item correlations (e.g., Andaleeb, 1989).

The matrix provided some insights into the convergent validity of the constructs, since high correlations among the items measuring the same construct would suggest convergent validity. The examination of the relative magnitude of the within-construct inter-item correlations revealed that most constructs exhibited convergent validity, with the exception of commitment. For instance, inter-item correlations seldom fell below 0.5 for satisfaction, mutual satisfaction, and for the constructs of control sharing and autonomy.

In addition, correlations between different measurement methods provided further support for the convergent validity of some constructs. This was the case for trust, for which items TR2 and TR3 were significantly correlated with mutual trust as estimated by the JVGM (TRGM). A similar conclusion was reached for the constructs of satisfaction and mutual satisfaction, because of the magnitude of the correlations among their respective items. In contrast, with relatively low within-construct correlations for its items, the construct of commitment (COM2, COM6, COM5, COM3, COM1) appeared to lack convergent validity. This situation was further supported by the low correlations between items of commitment and the JVGM's assessment of commitment (P1COM and P2COM).

Furthermore, examination of the inter-item matrix revealed that within-construct inter-item correlations were generally greater than between-construct inter-item correlations. This was observed particularly for the constructs of control sharing, autonomy, business performance, trust, conflict, satisfaction, and

mutual satisfaction. For example, within-construct correlations for operational control ranged from 0.54 to 0.93 while between-construct correlations never exceeded 0.35. These results supported the constructs' discriminant validity. Again, the situation for commitment was different. Items of commitment exhibited high correlations with dimensions of trust and satisfaction. These correlations suggested that the measure of commitment lacked discriminant validity.

The convergent and discriminant validity of the commitment construct was further investigated with factor analyses combining items from different constructs, including trust and commitment. Having been found to be highly correlated with these constructs, satisfaction was also included. These analyses were performed to determine whether the constructs could be distinguished. Results indicated that satisfaction could be separated out. In addition, a single factor with an eigenvalue greater than 1 combining items of trust and commitment was extracted. Labelled trust/commitment, this factor included two items of trust (TR2: My firm has a high degree of trust in this partner and TR3: Our partner is a company that stands by its word) and two items of commitment (COM2: Our JV with this partner is a long-term alliance and COM6: My firm wants to be patient and to make this JV work). These results suggested that the construct of commitment lacked both discriminant and convergent validity.

These results regarding commitment and trust can be explained in two ways. First, conceptually, trust and commitment are closely related constructs.

Prior research described the presence of trust as a major factor in the development of commitment in a relationship. In fact, the development of commitment in a relationship had been portrayed as requiring an important foundation of trust in an interorganizational relationship (Dwyer, Schurr, and Oh, 1987; Seabright, Levinthal, and Fichman, 1992). In short, these two constructs were not distinguished in statistical analyses because they were closely intertwined at the conceptual level.

Second, the cross-sectional nature of this study can also be invoked to explain these results, or at least to intensify problems resulting from conceptual proximity. A cross-sectional design like the one used in the study measured constructs *ex post facto*, and did not allow the precise examination of the development of trust and its following impact on the emergence of commitment. This design was limited in its ability to distinguish these constructs, and the effect of one on the other. This limitation would explain the extraction of a single factor which combined dimensions of trust with dimensions perceived as resulting from the presence of trust in a relationship. In other words, this factor merged assessments of the level of trust and of the impacts on a relationship generally attributed to trust. These impacts include, among others, a longer-term perspective on the relationship, feelings of security, and patience. In contrast, a longitudinal study would have allowed the examination of the development of trust and commitment, and the impact of trust on commitment. In conclusion, the conceptual proximity of trust and commitment, as well as the inherent nature and

limitations of the study's cross-sectional design, were thought to explain the lack of discrimination between the two constructs.

Nomological validity

Correlations in Table 6-3 also provided support to the nomological validity of the constructs. For instance, as proposed in the literature, trust (TR) and commitment (COM) were positively correlated with satisfaction (SAT and MSAT) and business performance (GPERF and OPPERF). Negative correlations between conflict (CON) and trust (TR), as well as with performance constructs, indicated that these constructs' behaviors were consistent with the literature. In turn, no conclusions were reached regarding correlations between control and autonomy constructs with relationship and performance variables. Since these constructs had not been examined before, no prior research could guide interpretation.

Assessment of mutual constructs

The reliability and validity of mutual constructs, measured from aggregated data, were assessed using the same procedures and techniques as used for individual data. Factor analyses were conducted to examine the consistency of constructs, and their reliability was assessed with Cronbach's alpha. Inter-item and bivariate correlation matrices were computed to investigate validity issues.

TABLE 6-3
Pearson correlations: Individual constructs

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|----------|---------|-------|-------|--------|-------|---------|----------|----------|----------|---------|---------|
| 1.OPCTR | | | | | | | | | | | |
| 2.TECTR | - | | | | | | | | | | |
| 3.STCTR | - | - | | | | | | | | | |
| 4.OPAUT | 0.03 | 0.09 | 0.09 | | | | | | | | |
| 5.TEAUT | -0.10 | 0.16* | -0.05 | - | | | | | | | |
| 6.STAUT | 0.00 | 0.00 | -0.08 | - | - | | | | | | |
| 7.TR | 0.29** | 0.07 | 0.12 | 0.08 | 0.01 | 0.00 | | | | | |
| 8.COM | 0.16# | 0.06 | 0.05 | 0.06 | 0.02 | -0.03 | 0.63*** | | | | |
| 9.CONF | -0.24** | 0.08 | -0.07 | -0.14# | -0.04 | -0.21** | -0.51*** | -0.39*** | | | |
| 10.SAT | 0.17* | -0.01 | 0.14# | 0.15* | 0.01 | 0.16* | 0.57*** | 0.55*** | -0.58*** | | |
| 11.MSAT | 0.18* | 0.02 | 0.06 | 0.16* | -0.03 | 0.26** | 0.57*** | 0.53*** | -0.58*** | 0.79*** | |
| 12.BPERF | 0.29** | -0.13 | 0.03 | 0.07 | -0.05 | 0.19* | 0.30** | 0.38*** | -0.57*** | 0.64*** | 0.57*** |

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

OPCTR Operational control, TECTR Technological control, STCTR Strategic control, OPAUT Operational autonomy, TEAUT Technological autonomy, STAUT Strategic autonomy, TR trust, COM Commitment, CONF Conflict, SAT Satisfaction, MSAT Mutual satisfaction, BPERF Business performance

Factor analyses of aggregated data confirmed the structure of the constructs identified from individual data. While factor loadings were not identical, they were most often of the same magnitude as those obtained from individual data. In a few cases, ranks of items were inverted. In addition, except for mutual commitment, all constructs exhibited an alpha coefficient above 0.7 and generally greater than those obtained for individual data (See Table 6-4).

The normality of the distribution of the mutual constructs was tested with a Kolmogorov-Smirnov test of normality. This test has been described as more powerful than the chi-square test when ordinal data are available (Siegal and Castellan, 1988). The test was performed since the presence of a distribution for mutual constructs significantly different from a normal distribution could potentially violate assumptions of OLS regression analysis. Results showed that none of the constructs had a distribution significantly different from the normal distribution (See Table 6-4). They supported the choice of the square root of the product of the responses as the aggregation method for this study. This issue is further discussed in the section on the assessment of the aggregation method.

Finally, inspection of the inter-item correlation matrix computed with aggregated data led to conclusions similar to those reached for individual data. Inter-item correlations did not support the discriminant and convergent validity of mutual commitment. Factor analyses led to the identification of a factor which

combined items of trust and commitment, as was the case for individual data. In addition, the assessments of the nomological validity with Pearson correlation coefficients revealed similar patterns of correlations as for individual constructs.

TABLE 6-4
Cronbach's alpha and Kolmogorov-Smirnov normality test
Mutual constructs

| | Number of items | Cronbach's Alpha | Kolmogorov-Smirnov Z | 2-tail p |
|------------------------|--------------------|---------------------|-------------------------|-------------|
| Operational control | 9 | 0.95 | 0.82 | 0.52 |
| Technological control | 4 | 0.85 | 0.88 | 0.42 |
| Strategic control | 4 | 0.79 | 1.17 | 0.13 |
| Operational autonomy | 9 | 0.95 | 1.05 | 0.21 |
| Technological autonomy | 4 | 0.89 | 0.68 | 0.74 |
| Strategic autonomy | 3 | 0.79 | 0.59 | 0.88 |
| Trust | 2 | 0.88 | 1.31 | 0.07 |
| Commitment | 5 | 0.64 | 0.52 | 0.95 |
| Conflict | 5 | 0.83 | 1.08 | 0.19 |
| Satisfaction | 3 | 0.90 | 1.04 | 0.23 |
| Mutual satisfaction | 3 | 0.91 | 0.67 | 0.75 |
| Business performance | 10 | 0.92 | 0.80 | 0.58 |

Conclusions on the validity of the constructs

In previous pages, statistical analyses provided support for the convergent, discriminant, and nomological validity of the constructs composing the study's research model, with the exception of commitment. In addition, analyses conducted on mutual constructs, measured from aggregated data, produced results similar to those obtained for individual data. With little support

for its validity and reliability, the construct of commitment was dropped from the study, and replaced by the trust/commitment construct. This construct combined items of commitment and trust, and analyses supported its validity and reliability ($\alpha = 0.80$). The study's research model and hypotheses were revised accordingly. These revisions are discussed in this chapter's last section.

2. Assessment of source convergence

Before undertaking final data analysis and hypothesis testing using aggregated data, the extent of convergence among data sources' perspectives was examined. The objective of this analysis was to determine whether the parent firm and JVGM respondents exhibited sufficient perceptual agreement for their answers to be aggregated. Consistency among sources' perspectives was deemed important for structure-related constructs, such as control and performance, as well as for behavioral dimensions, such as conflict. Significant differences for these constructs could indicate, among other things, that the respondents had interpreted items of the questionnaire in different ways, or had been reporting on different JVs. Such findings would throw into question the validity of the related constructs. In turn, discrepancies on sentiment constructs such as trust and satisfaction were expected, or at least were to be the object of more tolerance. Indeed, it was difficult to expect that respondents would "feel" or perceive a JV in identical ways. This study implicitly proposed that such

differences could exist in JVs with little control sharing. Building from John and Reve (1982), it was believed that these discrepancies would reflect "real" differences among respondents rather than problems with the questionnaire, the key informant technique, or the multi-source approach.

To assess perceptual consistency, the Case-1 intraclass correlation coefficient (ICC-1) proposed by Shrout and Fleiss (1979) was used. ICC-1 was calculated for all the items with one-way analysis of variance (ANOVA) according to the following formula:

$$ICC-1 = \frac{(BMS - WMS)}{BMS + (k-1)WMS}$$

where BMS is the between targets mean square, WMS is the within mean square and k is the number of respondents per JV. The significance of ICC-1 was tested with an *F* test. A significant *F* at the 0.05 level indicates that WMS is small compared to BMS and that the respondents' perspectives are consistent.

ICC-1 was calculated for all the items of the study's constructs. As envisioned, differences in perceptions were found for items related to sentiments constructs, such as TR3 ($p = 0.13$), and in particular for items of commitment that were later dropped from analysis: COM1 ($p = 0.08$), COM3 ($p = 0.09$), and

COM4 ($p = 0.12$). The construct of commitment exhibited less perceptual convergence compared to other constructs, in addition to construct validity. These results further supported the replacement of this construct from the study. All other items were significant at the 0.05 level, even though ICC-1 is considered a conservative test, and a significance level of 0.10 is often used in the literature for testing convergence (e.g., Smith, 1992). Overall, these results suggested that there was significant consistency among respondents. In addition to the use of aggregated data for hypothesis testing, the results supported the substitution approach proposed for the study.

3. Assessment of the aggregation method

The final step of preliminary analysis entailed the assessment of the aggregation method proposed in this study, i.e., the mathematical mean resulting from the square root of the product of responses. To our knowledge, and as noted by Smith (1992), there were no indications in the literature regarding the selection and assessment of aggregation methods. Therefore, the aggregation method used in the study was assessed using a procedure based on the one proposed by Smith (1992). The procedure involved the examination of the reliability, normality of the resulting distribution and predictive validity of the mutual constructs. Results were compared to those obtained with an alternative method, the mean of the responses. Three constructs were used for the

analysis: strategic control sharing, trust/commitment, and mutual satisfaction. These constructs were selected since they were important constructs from each of the three groups of variables composing the study's research model.

Reliability was assessed with Cronbach's alpha. As shown in Table 6-5, the two methods provided almost identical coefficients for the three constructs. The normality of the distributions of the constructs obtained from the two methods was tested and compared using the Kolmogorov-Smirnov test. Results showed that the mean-based method produced distributions significantly different (at 0.05) from the normal distribution for the strategic control construct. In turn, none of the constructs using the square root method exhibited a distribution significantly different from the normal distribution. This situation was observed for the three constructs selected for analysis, as well as for all the constructs composing the research model (See Table 6-5).

The next step involved the assessment of the predictive validity of the constructs, using multiple regression analysis. Variance explained (R^2) was used as an indication of predictive validity. Regression analyses were carried out with mutual satisfaction (MSAT) as the dependent construct, and strategic control sharing (STCTR) and mutual trust (TR) as the independent ones. Comparison of the R^2 of each equation suggested that the two methods produced similar results. This observation was also made for the magnitude and significance level of the standardized regression coefficients.

In conclusion, the above analysis showed that there were few differences between the method selected in this study, the square root method, and an alternative method based on the mean of the responses. The most noticeable difference between the two methods was observed for the normality of the distributions of strategic control sharing. In contrast to the square root method, the mean method produced distributions significantly different from the normal distribution. These results suggested that the use of the mean method could have possibly violated assumptions of OLS regression. They also further supported the selection of the square root method. This method did not produce distributions that were different from the normal and, thereby, did not represent a potential violation of OLS regression's assumptions.

TABLE 6-5
Comparison of aggregation methods

| | <u>Square-root method</u> | | | <u>Mean method</u> | | |
|---|---------------------------------|----------------------|------------------------|---------------------------------|----------------------|------------------------|
| | Strategic Control Sharing | Trust/ Commitment | Mutual Satisfaction | Strategic Control Sharing | Trust/ Commitment | Mutual Satisfaction |
| Cronbach's Alpha | .79 | .80 | .91 | .80 | .81 | .91 |
| Kolmogorov- Smirnov Z | 1.17 | .51 | .67 | 1.56 | .57 | .72 |
| 2-tail p. | .13 | .96 | .75 | .04 | .90 | .68 |
| Standardized Regression Coefficient | -.01 | .58 | | -.01 | .58 | |
| 2-tail p. | .97 | .00 | | .79 | .00 | |
| R ² | | | .35 | | | .34 |

4. Conclusion: Revision to the research model

This chapter presented different analyses conducted to assess the validity of the study's constructs, the use of aggregated data, and the method of aggregation of data. These analyses supported the use of aggregated data and of the proposed aggregation method. However, in contrast to other constructs, commitment appeared to lack both convergent and discriminant validity, as well as reliability. Consequently, commitment was replaced by the construct of trust/commitment. The hypotheses involving the constructs of commitment (Hypotheses 2, 6 and 10) and trust (Hypotheses 1, 5 and 9) were combined and reformulated as follows:

H1/2: An increase in the level of trust/commitment in a JV will result in an increase in JV performance.

H1/2a: An increase in a parent firm's assessment of trust/commitment in its partner will result in an increase in its assessment of JV performance.

H1/2b: An increase in the mutual assessment of trust/commitment in a JV will result in an increase in the mutual assessment of JV performance.

H5/6: An increase in control sharing will result in an increase in the level of trust/commitment in JVs.

H5/6a: An increase in a parent firm's assessment of control sharing in a JV will result in an increase in its assessment of trust/commitment.

H5/6b: An increase in the mutual assessment of control sharing in a JV will result in an increase in the mutual assessment of trust/commitment.

H9/10: An increase in autonomy will result in an increase in the level of commitment in JVs.

H9/10a: An increase in a parent firm's assessment of the autonomy of a JV will result in an increase in its assessment of trust/commitment.

H9/10b: An increase in the mutual assessment of the autonomy of a JV will result in an increase in the mutual assessment of trust/commitment.

CHAPTER 7

SAMPLE CHARACTERISTICS AND DESCRIPTIVE STATISTICS

This chapter reports descriptive results regarding the sample JVs and the main constructs of the study. The first section presents general statistics on sample JVs, including size, industry, structure, international nature, and operating status. In the second section, descriptive results allow for the identification of division of control patterns. Similar statistics for relationship dynamics and JV performance variables are also discussed. In addition, correlations between objective and perceptual measures of performance are examined. The chapter concludes with a summary of the sample JVs' main characteristics.

1. General characteristics of the sample

The sample included responses from the pilot study and the survey described earlier, for 173 participants and a total of 93 JVs, out of a population of 141 qualifying JVs. The characteristics of these JVs are reviewed along dimensions of motives of formation, size, division of equity patterns, proportion of international JVs, industry, survival, and age.

Motives of formation

Table 7-1 shows that the reduction of risk and of capital investment were the major motives behind the formation of sample JVs. The items "spreading risk by having a partner" (mean = 3.34) and "reducing capital investment" (mean = 3.41) were found to be the most important objectives in the parent firms' decision to establish their JV. Technological considerations were another major reason for forming a JV. Items related to technology matters such as "obtaining the partner's technology" and "reducing the costs/risks of technology development" were also perceived as important. Multiple *t*-tests confirmed that these four items represented the most important objective pursued by parent firms in the formation of their JVs. Obtaining raw materials and marketing skills were among the least important objectives.

TABLE 7-1
Importance of various objectives in parents' decision to establish their JV

| OBJECTIVES | MEAN ^a | S.D. |
|--|-------------------|------|
| Spread risk by having partner | 3.34 | 1.46 |
| Reduce capital investment | 3.41 | 1.51 |
| Obtain access to marketing skills | 2.51 | 1.46 |
| Access distribution channels | 2.75 | 1.59 |
| Obtain partner's technology, patent, etc. | 3.12 | 1.66 |
| Facilitate rapid market entry | 2.80 | 1.13 |
| Promote development of new product | 2.74 | 0.91 |
| Obtain raw materials | 2.63 | 1.29 |
| Exploit your firm's technology | 2.66 | 1.23 |
| Reduce costs/risks of technology development | 2.94 | 1.39 |

^a 1 = Not important 3 = Moderately important 5 = Very important

Size

Sample JVs were of various sizes, measured in terms of sales in CDN\$. Nevertheless, most JVs could be characterized as small and medium-sized firms (See Table 7-2). Approximately 47 percent of the sample JVs had sales of CDN\$25 million or less. In turn, only ten JVs (11%) had sales over CDN\$100 million. This characteristic was thought to mirror the structure of the Canadian industry, in which a majority of firms exhibit sales of less than \$100 million.

International JVs

Among sample JVs, 70 ventures, or 75 percent, had at least one parent firm headquartered outside Canada. These were considered international JVs (IJVs). Without exception, all 84 foreign parent firms were from developed countries. A majority were based in the USA (54, or 64%). Other foreign parent firms were headquartered in Europe (21), in Asia (7), and in the Australia-New Zealand region (2). As a result, approximately 49 percent, or 34 sample IJVs, were partnerships between a Canadian and an American firm. Others IJVs involved a Canadian company with a partner from Europe (13), Japan (4), or Australia (1). There were also 18 IJVs involving two foreign firms.

Despite their international nature, most sample JVs had a Canadian market focus. On average, domestic sales accounted for 67 percent of the JVs'

TABLE 7-2
General characteristics of sample JVs

| <u>JV SALES</u> | | | <u>JV EQUITY SPLIT</u> | | |
|-------------------------|----------|-----------|------------------------|-----------|-----------|
| | # | % | | # | % |
| Less than \$5 million | 13 | 14 | 75/25 to 60/40 | 13 | 14 |
| \$6 to \$25 million | 31 | 33 | 60/40 | 8 | 9 |
| \$26 to \$50 million | 13 | 14 | 60/40 to 51/49 | 2 | 2 |
| \$51 to \$100 million | 17 | 18 | 51/49 | 7 | 7 |
| More than \$100 million | 10 | 11 | 50/50 | <u>63</u> | <u>68</u> |
| Not available | <u>9</u> | <u>10</u> | Total | 93 | 100 |
| Total | 93 | 100 | | | |

| <u>JV INDUSTRY</u> | | | <u>YEAR OF FORMATION</u> | | |
|--------------------------|----------|----------|--------------------------|-----------|-----------|
| | # | % | | # | % |
| Food | 7 | 8 | Before 1970 | 8 | 9 |
| Plastic products | 5 | 5 | 1970-1980 | 27 | 28 |
| Textiles and clothing | 4 | 4 | 1981-1985 | 25 | 31 |
| Wood and furniture | 8 | 9 | 1986-1991 | <u>29</u> | <u>31</u> |
| Pulp and paper | 10 | 11 | Total | 93 | 100 |
| Printing | 4 | 4 | | | |
| Primary metal | 2 | 2 | | | |
| Fabricated metal | 12 | 13 | | | |
| Transportation equip. | 6 | 7 | | | |
| Electrical products | 3 | 3 | | | |
| Non-metal. mineral prod. | 3 | 3 | | | |
| Chemicals | 13 | 14 | | | |
| Other manufacturing | 7 | 8 | | | |
| Not identified | <u>8</u> | <u>9</u> | | | |
| Total | 93 | 100 | | | |

total sales (S.D. = 35.0%, mode = 98.0%, median = 85.0%). Only 26 JVs exported more than 50 percent of their sales. This characteristic was believed to be consistent with the large number of small and medium-sized JVs observed earlier in the sample. Essentially, sample JVs were mostly formed to serve the Canadian domestic market and had a size that corresponded to the capacity of this market.

Division of equity

In a majority of sample JVs (68%), equity was divided on a 50/50 basis (See Table 7-2). Only a small number of JVs (13 JVs, 14% of the sample) had a parent firm holding more than 60 percent of the JV's equity. This characteristic was believed to be consistent with the most common patterns of division of ownership in developed country JVs (e.g., Beamish, 1985, 1993).

Industry

Most major manufacturing industries were represented in the sample. Yet, more than a third of the sample came from three industries: the pulp and paper industry (10), the fabricated metal products industry (11), and the chemical products industry (13). A majority of JVs were in capital-intensive, high value-added industries. The significant number of JVs in these industries was thought to be consistent with the importance given to reducing capital investments, and cost and risk sharing in parent firms' motives for the formation of JVs in Canada.

Survival and age of sample JVs

Finally, 57 of the 93 sample JVs (61%) were still in operation at the time of data collection in 1992. More than half (19) of the 36 non-surviving JVs had ceased operating between 1985 and 1990, and the remainder were terminated

between 1990 and 1992. Furthermore, the sample incorporated a mix of recently-formed and older, more established JVs. Approximately 37 percent of the JVs (35 out of 93) had been formed before 1981. In turn, 31 percent of the sample JVs had been in operation for five years or less, while 50 percent had been in existence for at least ten years. The average age of sample JVs was 10.6 years; (S.D.: 0.73 years, mode: 5.0 years; median: 9.0 years).

2. Descriptive statistics

This section presents descriptive statistics on the constructs in the research model. These statistics are provided for control sharing and autonomy regarding operational, technological, and strategic activities identified in Chapter 6. Similar statistics are produced for the constructs of trust/commitment, conflict, satisfaction, mutual satisfaction and business performance.

Patterns of control sharing

Examination of the control exercised by parent firms over specific activities of JVs at the time of their formation allows the identification of different patterns of control sharing. Table 7-3 presents descriptive results regarding the three dimensions of division of control identified earlier: operational control, technological control, and strategic control. To simplify interpretation, control sharing was recoded on a three-point scale. Originally measured on a five-point

scale (1, "*Your firm controls*," 3, "*Partners share control*," and 5, "*Your partner controls*"), this scale was recoded to evaluate the extent of control sharing over single and grouped activities, without distinguishing which of the partners exercised dominant control. Specifically, scores of 4 and 5 became 2 and 1, respectively. On the resulting three-point scale, 1 indicated that *one parent firm controls the venture*, 2 that *one parent firm exercises greater but not complete control*, and 3 that *parent firms share control*.

Table 7-3 shows that the extent of control sharing may vary considerably across activities of JVs. For instance, consistent with Geringer (1986), control over strategic decisions such as capital expenditures and financing of the venture appears to be more shared than other decisions and activities of JVs. These decision areas involve shared control for over 50 percent of all respondents, and for up to 85 percent of respondents in the case of capital expenditures. *T*-tests confirmed this observation and showed that strategic control was shared significantly more than operational control ($t = -10.77$; $p < 0.001$) and technological control ($t = -12.21$; $p < 0.001$).

Similar results were obtained for mutual assessments of division of control. Essentially, the division of control over decisions described as strategic was thought to reflect the shared decision making nature of JVs. These decisions are also frequently involved in veto rights found in typical JV agreements (Killing, 1982; Schaan, 1983).

TABLE 7-3
Descriptive results: Division of control constructs

| | INDIVIDUAL ASSESSMENTS ^b | | | MUTUAL ASSESSMENTS ^c | | |
|--|--|-------------|-------------|------------------------------------|-------------|-------------|
| | MEAN | S.D. | MEDIAN | MEAN | S.D. | MEDIAN |
| OPERATIONAL CONTROL^a | | | | | | |
| Hiring/firing non-technical personnel | 1.87 | 0.94 | 1.00 | 1.86 | 0.85 | 1.73 |
| Hiring/firing technical personnel | 1.88 | 0.93 | 2.00 | 1.84 | 0.81 | 1.73 |
| Pricing | 2.03 | 0.93 | 2.00 | 1.94 | 0.80 | 1.73 |
| Distribution | 1.85 | 0.92 | 1.00 | 1.82 | 0.81 | 1.73 |
| Marketing | 1.81 | 0.90 | 1.00 | 1.75 | 0.80 | 1.41 |
| Day-to-day management | 1.68 | 0.87 | 1.00 | 1.69 | 0.82 | 1.26 |
| Hiring/firing of JV senior managers | 2.09 | 0.94 | 2.00 | 2.03 | 0.83 | 2.00 |
| Cost control | 2.05 | 0.90 | 2.00 | 2.03 | 0.79 | 2.00 |
| Manufacturing | 1.83 | 0.89 | 2.00 | 1.79 | 0.78 | 1.73 |
| Total, OPERATIONAL CONTROL | 1.90 | 0.75 | 1.89 | 1.88 | 0.67 | 1.81 |
| TECHNOLOGICAL CONTROL | | | | | | |
| Patents and trademarks | 1.67 | 0.87 | 1.00 | 1.62 | 0.78 | 1.26 |
| Technology/engineering of product | 1.76 | 0.88 | 1.00 | 1.70 | 0.76 | 1.41 |
| Process technology | 1.79 | 0.84 | 2.00 | 1.74 | 0.70 | 1.73 |
| R&D | 1.88 | 0.92 | 2.00 | 1.81 | 0.78 | 1.73 |
| Total, TECHNOLOGICAL CONTROL | 1.77 | 0.70 | 1.75 | 1.72 | 0.63 | 1.68 |
| STRATEGIC CONTROL | | | | | | |
| Hiring/firing JV general manager | 2.27 | 0.92 | 3.00 | 2.27 | 0.79 | 2.60 |
| Financing of the JV | 2.49 | 0.80 | 3.00 | 2.42 | 0.74 | 2.95 |
| Deciding capital expenditures | 2.76 | 0.60 | 3.00 | 2.73 | 0.55 | 3.00 |
| Location of the JV | 2.33 | 0.90 | 3.00 | 2.28 | 0.76 | 2.45 |
| Total, STRATEGIC CONTROL | 2.46 | 0.62 | 2.50 | 2.43 | 0.56 | 2.55 |

^a 1 = One parent firm controls the venture 3 = Parent firms share control

^b n = 173

^c n = 61

Dominant control appeared to be more frequently exercised over technological activities, in comparison to operational ($t = 3.16$; $p < 0.01$) and strategic ($t = -12.21$; $p < 0.001$) decisions. For example, t -tests demonstrated that the item "patents and trademarks" was significantly more "dominated" than all other items. The item "technology/engineering of product" was described as being dominated by one of the parent firms by 54 percent of all respondents. Parent firms' attempts to ensure protection of their technological assets may explain this situation. In order to protect their technological competencies, parent firms are more likely to exercise and maintain dominant control over technological decisions. One could also suggest that firms contributing technological resources to JVs would also be more likely to protect their technological assets by seeking dominance of technology-related decisions.

Patterns of division of control over operational decisions and activities were found to be more diversified. Control over the hiring/firing of JV senior managers and technical personnel, as well as cost control and the different marketing functions, were generally shared between parent firms. In contrast, dominant control was found to be exercised over day-to-day management. Again, t -tests confirmed this observation, and revealed significant differences between all items, with the exception of technological control items. This dominant control over day-to-day management could be explained by parent firms' attempts to simplify the management of the venture. It may speed up decision making in the jointly-owned entity for decisions not necessarily requiring

significant inputs or resources from both partners. It also appears that, overall, operational decisions fall between strategic and technological ones in terms of control sharing. While control over strategic and technological decisions was found to be significantly more shared and dominant, respectively, operational control was found to be in the middle of these two extremes.

The ownership-control relationship

The literature suggests that a parent firm's control over a JV is generally related positively to its share of the venture's equity. This contention was supported in this sample. Particularly, operational control was found to be significantly more shared ($t = 3.37$; $p < 0.001$) in 50/50 JVs ($OPCTR_{50/50} = 2.00$) than in majority/minority JVs ($OPCTR_{m/m} = 1.63$). This situation was observed for technological control ($TECTR_{50/50} = 1.86$; $TECTR_{n/m} = 1.56$; $t = 2.77$; $p < 0.01$) and strategic control ($STCTR_{50/50} = 2.54$; $STCTR_{m/m} = 2.25$; $t = 2.58$; $p < 0.05$). Therefore, parent firms appeared to share control to a greater extent in 50/50 JVs than in majority/minority JVs.

In turn, correlations observed between a parent firm's equity position in a JV and its control (measured on a five-point scale) over operational decisions ($r = 0.11$; $p < 0.39$), technology-related activities ($r = -0.09$; $p < 0.52$), and strategic decisions ($r = 0.04$; $p < 0.76$), were not significant. These results may be explained by the large proportion of 50/50 JVs in the sample. They may also

indicate that ownership is not the only control mechanism available to parent firms. Parent firms do not rely solely on their equity position to exercise control. Further analyses were carried out for JVs with majority/minority equity holdings, in order to control for potential biases due to the large proportion of 50/50 JVs in the sample. Results showed that control and equity were significantly correlated in these ventures. Significant correlations were found between a parent firm's equity position and its operational control ($r = 0.32$; $p < 0.05$), its technological control ($r = 0.56$; $p < 0.05$), and strategic control ($r = 0.49$; $p < 0.05$).

Essentially, these analyses confirmed that a parent firm's extent of control over a JV is correlated with its share of a JV's equity. This observation is consistent with the typical relationship between ownership and control in developed country JVs (Beamish, 1985, 1993). Furthermore, results confirmed that the absence of significant correlations for the entire sample might be attributed to the large proportion of 50/50 JVs. Nevertheless, they also demonstrated the limitations associated with the use of the division of equity to assess the extent of parent control over JVs, in particular in 50/50 JVs.

Patterns of autonomy

The autonomy of sample JVs was assessed along the same dimensions as control sharing, i.e., operational, technological, and strategic autonomy. Also

like control sharing, a JV's autonomy was found to vary greatly across activities (Table 7-4). In particular, JVs generally had extensive operational autonomy. Decisions over these activities, and especially regarding technical and non-technical personnel as well as day-to-day management, appeared to be made mostly by JV managers, rather than by parent firm managers. In turn, JVs were found to enjoy significantly less technological autonomy ($t = -6.97$; $p < 0.001$) and strategic autonomy ($t = -12.86$; $p < 0.001$). Decisions related to process and product technology as well as R&D were mostly shared between JV and parent firm managers, while patents and trademarks were to a greater extent under the parents' authority. JVs also exhibited little strategic autonomy, as strategic decision making was usually assumed by parent firm managers. Indeed, capital expenditures and financial decisions appeared to be extensively influenced by parent firms. This limited technological and strategic autonomy was thought to reflect parent firms' desire to protect key technological competencies as well as to ensure effective use of their contribution to their JVs.

Finally, in contrast to control sharing patterns which tended to remain stable, JVs were found to progressively gain autonomy with time. In fact, the autonomy of JVs for their most recent year of operation was found to be significantly greater (at the 0.05 level) than at the time of formation. Significant increases in autonomy were observed for each single activity of JVs, as well as for the three dimensions of autonomy identified in this study.

TABLE 7-4
Descriptive results: Autonomy constructs

| | INDIVIDUAL ASSESSMENTS ^b | | | MUTUAL ASSESSMENTS ^c | | |
|---------------------------------------|--|------|--------|------------------------------------|------|--------|
| | MEAN | S.D. | MEDIAN | MEAN | S.D. | MEDIAN |
| OPERATIONAL AUTONOMY | | | | | | |
| Hiring/firing non-technical personnel | 1.87 | 1.21 | 1.00 | 1.72 | 0.99 | 1.41 |
| Hiring/firing technical personnel | 1.96 | 1.21 | 1.95 | 1.84 | 1.03 | 1.44 |
| Pricing | 2.56 | 1.46 | 2.56 | 2.38 | 1.29 | 2.24 |
| Distribution | 2.52 | 1.40 | 2.52 | 2.39 | 1.27 | 2.24 |
| Marketing | 2.62 | 1.50 | 2.61 | 2.44 | 1.37 | 2.24 |
| Day-to-day management | 1.96 | 1.27 | 1.00 | 1.87 | 1.14 | 1.41 |
| Hiring/firing of JV senior managers | 2.29 | 1.24 | 2.00 | 2.96 | 1.22 | 3.00 |
| Cost control | 2.31 | 1.21 | 2.00 | 2.19 | 1.03 | 2.03 |
| Manufacturing | 2.22 | 1.22 | 2.00 | 2.13 | 1.09 | 1.86 |
| Total, OPERATIONAL AUTONOMY | 2.25 | 1.06 | 2.25 | 2.12 | 0.98 | 2.03 |
| TECHNOLOGICAL AUTONOMY | | | | | | |
| Patents and trademarks | 3.48 | 1.30 | 3.48 | 3.46 | 1.24 | 3.59 |
| Technology/engineering of product | 3.06 | 1.27 | 3.00 | 2.95 | 1.12 | 3.00 |
| Process technology | 2.56 | 1.31 | 2.56 | 2.42 | 1.13 | 2.36 |
| R&D | 2.95 | 1.39 | 3.00 | 2.95 | 1.26 | 3.00 |
| Total, TECHNOLOGICAL AUTONOMY | 3.01 | 1.10 | 3.01 | 2.95 | 1.04 | 3.08 |
| STRATEGIC AUTONOMY | | | | | | |
| Financing of the JV | 3.90 | 1.19 | 4.00 | 3.87 | 1.05 | 3.91 |
| Deciding capital expenditures | 3.63 | 1.04 | 3.00 | 3.56 | 0.88 | 3.49 |
| Location of the JV | 3.64 | 1.33 | 3.63 | 3.52 | 1.21 | 3.68 |
| Total, STRATEGIC AUTONOMY | 3.72 | 0.99 | 3.72 | 3.65 | 0.88 | 3.68 |

^a 1 = Decided totally by JV managers 3 = Shared equally by JV and parent managers
5 = Decided totally by parent firm managers

^b n = 173

^c n = 61

Relationship dynamics variables

Descriptive results on relationship dynamics variables revealed that sample JVs exhibit relatively high levels of trust/commitment (See Table 7-5). Similarly, relatively low levels of conflict were found in sample JVs. The items "general management" and "manufacturing" involved the least frequent conflict. In *t*-tests, differences in frequency between these items and all others were significant at the 0.05 level. In turn, the items with the most frequent conflict were "capital expenditures" and the "relative control of parents." The importance of decisions related to capital expenditures for the ventures, as well as for the parent firms' resource commitments to the JVs, may explain the relatively higher level of conflict for this item. Statistics for the "relative control" item may also underline the conflictful nature and the importance given by parent firms to the issue of control in JVs. Nevertheless, the overall level of conflict in the sample JVs remained low, well under the scale middle point, just as the level of trust/commitment was judged to be relatively high.

These statistics may highlight that a JV cannot be formed and survive over a significant period without some basic trust between the partner firms. The same observation is valid if the partners are continuously involved in disagreements. Nevertheless, these results may also mirror the significant proportion of old and surviving JVs found in the sample. One could expect that older JVs still in operation would typically exhibit greater trust and lower conflict

TABLE 7-5
Descriptive results: Relationship dynamics constructs

| | INDIVIDUAL ASSESSMENTS ^c | | | MUTUAL ASSESSMENTS ^d | | |
|-------------------------------------|-------------------------------------|------|--------|---------------------------------|------|--------|
| | MEAN | S.D. | MEDIAN | MEAN | S.D. | MEDIAN |
| TRUST/COMMITMENT^a | | | | | | |
| TR2 | 3.87 | 1.17 | 4.00 | 3.71 | 1.14 | 3.87 |
| TR3 | 4.12 | 1.00 | 4.00 | 3.85 | 0.97 | 3.94 |
| COM2 | 3.88 | 1.25 | 4.00 | 3.80 | 1.13 | 3.87 |
| COM6 | 4.22 | 0.89 | 4.00 | 4.11 | 0.89 | 4.23 |
| Total, TRUST/COMMITMENT | 4.02 | 0.86 | 4.25 | 3.86 | 0.85 | 3.92 |
| CONFLICT^b | | | | | | |
| General management | 1.89 | 0.91 | 2.00 | 1.87 | 0.78 | 1.73 |
| Relative control of parents | 2.11 | 1.13 | 2.00 | 2.10 | 1.02 | 1.87 |
| Manufacturing | 1.83 | 0.91 | 2.00 | 1.75 | 0.77 | 1.41 |
| Capital expenditures | 2.31 | 1.02 | 2.00 | 2.18 | 0.81 | 2.00 |
| Marketing | 2.11 | 1.10 | 2.00 | 2.13 | 1.03 | 1.87 |
| Total, CONFLICT | 2.00 | 0.73 | 2.00 | 2.00 | 0.69 | 1.85 |

^a 1 = *Low* 5 = *High* ^b 1 = *Never* 5 = *Constantly*

^c n = 171 ^d n = 59

than younger ones. The years of experience would have allowed the parent firms the time to develop strong bonds between them. They would also have solved most of the major conflicts which could have threatened the stability and survival of the JV.

This situation was interpreted to represent a potential sample selection bias. Levels of trust and conflict could be correlated with the age of the ventures, thereby influencing the magnitude of the hypothesized relationships between the division of control and relationship dynamics variables. Accordingly, the

relationship between trust, conflict and the age of the JVs was examined in order to detect the presence of such a bias. Nevertheless, correlations between trust, conflict, and the JVs' year of formation provided no evidence of such bias. Correlations were smaller than 0.1 and not significant at the 0.05 level.

JV Performance

Sample JVs were also found to exhibit relatively high performance (See Table 7-6). For instance, with average scores over three, parent firms appeared to be at least moderately satisfied with their JVs — in general, in their performance, and in the relationship with their partner. For instance, only 24 percent of all respondents claimed to be somewhat or very dissatisfied with their JV. In turn, more than 60 percent of all JVs were found to evidence some degree of mutual satisfaction. Similarly, 60 percent of JVs were judged to perform at or above parents' initial expectations.

These statistics suggest that sample JVs' performance may be somewhat higher than has typically been reported in the JV literature. Several studies have reported percentages of JVs performing unsatisfactorily, ranging from approximately 37 percent to over 70 percent (Deloitte, Faskins and Sells International, 1989; Geringer and Hébert, 1991; Beamish, 1993). Although performance data were collected during a period considered by most as recessionary, the performance of the sample was perceived as generally good.

TABLE 7-6
Descriptive results: JV performance constructs

| | INDIVIDUAL ASSESSMENTS ^c | | | MUTUAL ASSESSMENTS ^d | | |
|---|-------------------------------------|-------------|-------------|---------------------------------|-------------|-------------|
| | MEAN | S.D. | MEDIAN | MEAN | S.D. | MEDIAN |
| SATISFACTION^a | | | | | | |
| JV | 3.75 | 1.23 | 4.00 | 3.77 | 1.16 | 4.00 |
| JV's performance | 3.56 | 1.33 | 4.00 | 3.71 | 1.21 | 3.87 |
| Relationship between partners | 3.56 | 1.35 | 4.00 | 3.57 | 1.27 | 3.87 |
| Total, SATISFACTION | 3.62 | 1.17 | 4.00 | 3.68 | 1.11 | 3.98 |
| MUTUAL SATISFACTION^a | | | | | | |
| JV | 3.24 | 1.30 | 3.00 | 3.14 | 1.15 | 3.00 |
| JV's performance | 3.25 | 1.35 | 4.00 | 3.19 | 1.19 | 3.46 |
| Relationship between partners | 3.44 | 1.33 | 4.00 | 3.37 | 1.18 | 3.46 |
| Total, MUTUAL SATISFACTION | 3.30 | 1.20 | 3.33 | 3.23 | 1.09 | 3.33 |
| BUSINESS PERFORMANCE^b | | | | | | |
| Overall performance | 3.15 | 1.15 | 3.00 | 3.12 | 1.07 | 3.00 |
| Sales | 3.08 | 1.28 | 3.00 | 3.00 | 1.22 | 3.00 |
| Profitability | 3.04 | 1.38 | 3.00 | 3.01 | 1.06 | 3.00 |
| Market share | 3.21 | 1.10 | 3.00 | 3.00 | 1.34 | 3.00 |
| Management of the JV | 3.47 | 0.87 | 3.00 | 3.44 | 0.74 | 3.26 |
| Technology/engineering of product | 3.33 | 0.78 | 3.00 | 3.32 | 0.74 | 3.00 |
| Process technology | 3.40 | 0.75 | 3.00 | 3.35 | 0.72 | 3.26 |
| Manufacturing | 3.42 | 0.84 | 3.00 | 3.41 | 0.74 | 3.26 |
| Marketing | 3.16 | 0.83 | 3.00 | 3.14 | 0.71 | 3.00 |
| Distribution | 3.21 | 0.70 | 3.00 | 3.19 | 0.63 | 3.00 |
| Total, BUSINESS PERFORMANCE | 3.25 | 0.72 | 3.20 | 3.22 | 0.70 | 3.20 |

^a 1 = *Very dissatisfied* 3 = *Neither dissatisfied nor satisfied* 5 = *Very satisfied*

^b 1 = *Much below initial expectations* 3 = *About equal to initial expectations*
5 = *Much above initial expectations*

^c n = 172

^d n = 61

However, this situation might be explained by the presence of several older surviving JVs in the sample, creating a potential bias toward surviving JVs. Since they were still in operation, older ventures could be suggested to exhibit a higher performance than other JVs. Significant correlations between the year of formation and business performance found for individual data ($r = -0.30$; $p < 0.05$) suggested the presence of this relationship. Nevertheless, with correlations significant at the 0.10 level for aggregated data, as well as non-significant results for satisfaction, the presence of a systematic relationship and bias was not fully supported. These results may also reveal that well-performing JVs simply tend to stay in existence longer.

Correlations between perceptual and objective measures of performance

Correlations between perceptual and objective measures of performance were also examined (See Table 7-7). In the case of individual assessments of performance, results generally supported Beamish's (1984) and Geringer and Hébert's (1991) conclusions regarding correlations between objective and subjective measures of JV performance. Except for business performance, perceptual measures were significantly and positively correlated with duration. Only satisfaction and business performance exhibited significant correlations with JV survival. In the case of mutual assessments of performance, no subjective measures were significantly correlated with objective measures.

As for relationship dynamics variables, characteristics of the sample and the presence of several old, surviving JVs were presumed to affect correlations between perceptual measures and objective measures. Consequently, the same correlation analyses were carried out on a sub-sample of JVs formed since 1980. Use of this sub-sample was thought to reduce effects from a potential selection bias. Results generally provided stronger correlations between objective and perceptual measures (See Table 7-7). This was especially the case for duration with most subjective measures.

TABLE 7-7
Pearson correlations between subjective and objective measures
of JV performance

| | All JVs ^a | | JVs formed since 1980 ^b | |
|--------------------------------------|----------------------|----------|---------------------------------------|----------|
| | Duration | Survival | Duration | Survival |
| <u>INDIVIDUAL ASSESSMENTS</u> | | | | |
| Satisfaction | 0.17* | 0.17* | 0.35*** | 0.24* |
| Mutual satisfaction | 0.21** | 0.11 | 0.23* | 0.22* |
| Business performance | 0.13 | 0.16* | 0.25** | 0.21* |
| Overall performance | 0.21** | 0.11 | 0.33*** | 0.15# |
| <u>MUTUAL ASSESSMENTS</u> | | | | |
| Satisfaction | 0.11 | 0.16 | 0.38* | 0.05 |
| Mutual satisfaction | 0.22# | 0.16 | 0.23# | 0.14 |
| Business performance | 0.08 | 0.14 | 0.25# | 0.15 |
| Overall performance | 0.20# | 0.08 | 0.39** | 0.01 |

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 172$ (individual), $n = 61$ (mutual)

^b $n = 108$ (individual), $n = 41$ (mutual)

The importance of trust and commitment

In this study, parent firms and JV informants were convinced of the importance of an atmosphere of mutual trust and commitment, at all stages of a JV's life cycle. The presence of trust between partner firms was first deemed essential for the formation of a JV. Few JV projects will likely go forward or be accepted in the absence of a minimum level of trust between the parent firm managers. For the operation and continuous development of JVs, respondents suggested that no managers could afford to dismiss issues of trust and commitment. "Without a climate of trust, our JV just could not work", was a typical respondent's comment. Within this perspective, trust and cooperation were intimately associated: effective cooperation is unlikely without a basis of trust. Trust was also described as something that developed with time in JVs, and as the result of a process managers could, and should, willingly manage. These comments were consistent with the notion that trust is both an input and output of a relationship.

Several benefits were associated with the presence of trust. Some benefits were more psychological in nature and involved increased tolerance, reduced apprehension, insecurity and suspicion, as well as a more positive attitude toward the partner. The latter element was judged important for effective and rapid conflict resolution. Other benefits had clearer economic and managerial implications. Trust typically resulted in a simpler relationship between

Essentially, the relationships between management's assessments of performance and the survival as well as the longevity of JVs were stronger in recently-formed JVs than in older ones. These results may cast some light on some performance-related issues which are likely to influence parent firms' decision whether to terminate a JV. In recently-formed JVs, continued existence appeared to be related to the JVs' ability to satisfy the parent firms' expectations in terms of overall performance. As it would be expected, dissatisfied parent firms did not show intentions of remaining involved in a JV. In contrast, the duration and survival of older JVs was poorly related with their business and overall performance. Further analyses suggested that the longevity of these ventures was a strict matter of financial performance, particularly in terms of sales and profitability. Therefore, financially JVs successful will remain in operation, even though they may not achieve their operational objectives, or parent firms are not extensively satisfied with their ventures.

3. Summary of sample JVs' characteristics

This chapter provided different descriptive statistics regarding sample JVs as well as the constructs examined in this research. Relationships between parent firms' ownership and control, as well as between perceptual and objective measures of performance, were also investigated and partially supported.

As was expected, these statistics revealed that sample JVs exhibited

characteristics described as typical of market economy developed country JVs (Beamish, 1985, 1993). For instance, achieving access to different resources or assets, such as capital and technology, was found to be the major reason for forming JVs, in contrast to government pressures in the case of LDC JVs (See Table 7-8). IJVs included in the sample involved parent firms headquartered in developed countries, and the most common pattern of division of JV equity was 50/50. Furthermore, analyses confirmed that a majority ownership position was associated with greater control. Finally, the percentage of parent firms expressing dissatisfaction with their JVs was small relative to the number typically reported in the literature, especially in the case of LDC JVs, where this percentage of dissatisfaction can surpass 60 percent.

TABLE 7-8
Summary of sample JVs' characteristics

| <u>CHARACTERISTICS</u> | <u>SAMPLE JVs</u> |
|---------------------------------------|--|
| Motives for formation | Reduction of capital investment Spreading risk Obtain partner's technology |
| Percentage of IJVs | 75% |
| Origin of foreign partner | Developed countries |
| Market focus of JVs | Domestic market |
| Most common division of equity | 50/50 |
| Ownership-control relationship | Direct |
| Percentage of dissatisfaction with JV | 24% |

CHAPTER 8

CONTROL SHARING, RELATIONSHIP DYNAMICS AND JV PERFORMANCE

This chapter examines the relationships between control sharing, the relationship dynamics constructs, and JV performance. The nature of these relationships is discussed and hypotheses regarding these relationships are tested using OLS regression analyses. Results obtained for recently-formed JVs are also examined and compared.

1. Relationship dynamics and JV performance

The quality and dynamics of the relationship between partner firms have often been described as critical elements of the performance and effectiveness of inter-organizational exchange relationships, including JVs. Several researchers have stressed the role of trust and commitment for JV success. Others have described inter-partner conflict as one of the major causes of failure and bad performance of JVs.

The importance of trust and commitment

In this study, parent firms and JV informants were convinced of the importance of an atmosphere of mutual trust and commitment, at all stages of a JV's life cycle. The presence of trust between partner firms was first deemed essential for the formation of a JV. Few JV projects will likely go forward or be accepted in the absence of a minimum level of trust between the parent firm managers. For the operation and continuous development of JVs, respondents suggested that no managers could afford to dismiss issues of trust and commitment. "Without a climate of trust, our JV just could not work", was a typical respondent's comment. Within this perspective, trust and cooperation were intimately associated: effective cooperation is unlikely without a basis of trust. Trust was also described as something that developed with time in JVs, and as the result of a process managers could, and should, willingly manage. These comments were consistent with the notion that trust is both an input and output of a relationship.

Several benefits were associated with the presence of trust. Some benefits were more psychological in nature and involved increased tolerance, reduced apprehension, insecurity and suspicion, as well as a more positive attitude toward the partner. The latter element was judged important for effective and rapid conflict resolution. Other benefits had clearer economic and managerial implications. Trust typically resulted in a simpler relationship between

parent firms, a characteristic itself associated with quicker and more effective decision making. In such a context, parent firms most often appeared to spend more time cooperating and making the JV work, than trying to solve conflict, or "to test the extent to which our partner could be trusted and played a fair game." Trust emerged as a critical element supporting the development and expansion of cooperation between parent firms. Without trust, cooperation necessarily remained limited, thereby considerably reducing the chances that a JV was successful, and that parent firms achieved their objectives. Several parent firms also described trust as at least a partial substitute for formal, resource-consuming control mechanisms. Extensive mutual trust was not suggested as a complete substitute for formal decision making and control processes. Rather, less time and fewer resources were needed to scrutinize the partner for any potential hidden agenda, and to supervise closely the JV's activities and results.

The importance of trust was even more evident where it was absent. JVs with little mutual trust were systematically described as troublesome, time-consuming and dissatisfying experiences. In particular, JVGMs described situations where any attempt to communicate with parent firms resulted in either negative answers, closed doors, or inquisitive questioning. Any little issue became a motive for long discussions and disagreements. Without the required resources and support, these JVGMs quickly realized that their JV could not meet parent firms' expectations. Such distrustful situations often resulted in the JVGM resigning, or being fired, and in the JV being liquidated. Parent firm

managers associated the lack of trust with arduous and lengthy negotiations, an atmosphere of suspicion, and poor inter-personal relationships.

The presence of trust and commitment appeared to be closely related. In fact, these two elements of the inter-partner relationships were often difficult to distinguish, as the existence of commitment was described as improbable without a strong foundation of mutual trust. Yet, as expected, the presence of commitment was associated with the willingness to work out problems or conflicts, especially in the face of performance problems. The issue of the parent firms' commitment was not portrayed as critical in well-performing JVs; successful JVs seldom exhibited commitment problems. It was rather in the face of difficulties and disappointing results that the parent firms' commitment became critical. Within this perspective, in their discussion of commitment, parent firm informants generally minimized the psychological dimension of this concept (e.g., relational continuity, long-term perspective). They rather gave particular importance to the behavioral aspect of the concept: the parent firms' willingness to commit the resources required for the JV to be successful or to overcome performance problems. This perspective of commitment was also emphasized by JVGMs who typically associated commitment with the ability to access parent firms' resources. In contrast, lack of commitment was identified with difficulties in obtaining parent firms' attention and support to the JV, or to specific initiatives. In such a situation, one JVGM described its venture as "an orphan, without a father or mother, but still with the heritage of two parents to carry."

An example of effective commitment frequently cited was related to the profile of the parent firm managers assigned to the JV's board of directors, and especially to their rank and background. The nomination of senior managers with executive or operational responsibilities within their respective parent firms as members of the JV's board, or as consultants for specific problems and decisions, was deemed to be one of the best examples of genuine commitment, both in symbolic and material terms. Such individuals were thought to exhibit the authority and leadership required for the JV to access required resources, to receive adequate support, and by extension, to be successful. In contrast, the nomination of executives without clear executive responsibilities, or from staff rather than line positions, was described as especially ineffective. Sometimes named on the JV's board in recognition for loyal services, such individuals typically had to rely on headquarters' instructions and decisions rather than on their own decision making or spending authority, to approve JVs' initiatives and projects. Because of their need to consult with headquarters, the presence of these managers was depicted as slowing down JV decision making and limiting the venture's ability to cope with problems and changing environments. In addition to impairing the performance of JVs, such nominations represented a significant obstacle to the development of effective relationships between parent firm decision-makers, and of cooperation between the parent firms.

The spending authority of parent firm managers exemplifies how their profile and status can affect the dynamics of JVs. Cooperation between

managers with substantial spending authority (for example, with a limit of \$1 million) and managers with limited or no spending authority (for example, \$20,000 or less) is inherently difficult. Any decisions involving a significant investment will be delayed by the latter managers having to refer the decision to their superior or head office.

The impact of conflict

As expected, conflict between parent firms was described as an unavoidable characteristic of JVs. The presence of conflict and disagreement was acknowledged even in JVs with extensive inter-partner trust, as well as in relationships described as excellent. While it was possible for trust and conflict to coexist to some extent, a strong foundation of mutual trust was described as reducing the risk that small disagreements and misunderstandings degenerated into a major conflict.

JVGMs were the best placed to describe the consequences of inter-parent firm conflicts for JVs. For instance, one JVGM described the situation of its JV, a vertical venture in which one parent firm contributed the technology for a product used by the other parent firm. At some point, the parent firm which was the major customer of the venture refused a major shipment, with disastrous repercussions for the JV's financial results. The refusal was depicted as fuelling continuous disagreements. During this period, the JVGM had to concentrate all

his efforts on the resolution of the issue, at the expense of the JV's operations. Furthermore, all decisions, initiatives, or investments were blocked, as parent firms refused to talk or to commit resources until the issue was resolved. As one would expect, the performance of the venture suffered badly in this episode. This example complements Killing's (1983) earlier observations regarding the impact of conflict in JVs. Essentially, the presence of conflict may monopolize the attention and time of the parent firms' and JV's management. It is likely to block their communication and coordination. Ultimately, it may impede effective management of the JV's operations and implementation of its strategy.

Hypothesis testing

The above discussion suggested that the presence of trust and commitment was positively related with JV performance, while conflict was generally negatively related to performance. This is consistent with the hypotheses proposed earlier regarding the relationship dynamics-JV performance link. As described in Chapter 6, Hypotheses 1/2 stated that an increase in individual and mutual assessments of trust/commitment would result in an increase in the individual and mutual assessments of JV performance. Hypothesis 3 also proposed that an increase in conflict would result in a decrease in JV performance. These hypotheses were examined in OLS regression analysis. Analyses were carried out for individual and mutual assessment data, involving sample sizes averaging 170 and 59, respectively.

Standardized regression coefficients (β) are reported.

The analyses provided evidence supporting these hypotheses (See Table 8-1). Using simple regression, individual and mutual assessments of trust/commitment were significantly and positively correlated with all perceptual performance constructs. Similarly, individual and mutual assessments of conflict exhibited significant negative correlations with all perceptual measures, as well as with survival. Neither trust nor conflict appeared to share significant relationships with duration. Such results appeared consistent with correlations observed between duration and JV performance in Chapter 7. They would further support the contention that a JV's performance is a key factor of its longevity, and of the parents' decision to keep it in operation.

Multiple regression analyses were also conducted to assess the effects of trust/commitment and conflict on JV performance (See Table 8-2). With a few exceptions, the results were similar to those presented in Table 8-1. Again, individual assessments of trust/commitment had significant positive relationships with perceptual measures of performance. Individual assessments of conflict were also found to be negatively related to these variables and to survival. For mutual assessments, trust/commitment maintained significant positive relationships only with satisfaction, mutual satisfaction and overall performance. Conflict also showed its expected relationships with constructs of satisfaction, as well as with business performance, overall performance, and survival.

TABLE 8-1
Relationship dynamics and JV performance:
OLS standardized simple regression coefficients

| Dependent variables | Trust/Commit. | R ² | Conflict | R ² |
|--|-------------------|----------------|--------------------|----------------|
| <u>INDIVIDUAL ASSESSMENTS^a</u> | | | | |
| Satisfaction | 0.59*** (0.08) | 0.35*** | -0.59*** (0.08) | 0.34*** |
| Mutual satisfaction | 0.60*** (0.08) | 0.36*** | -0.54*** (0.08) | 0.28*** |
| Business performance | 0.44*** (0.09) | 0.19*** | -0.45*** (0.09) | 0.10*** |
| Overall performance | 0.46*** (0.09) | 0.21*** | -0.44*** (0.09) | 0.19*** |
| Survival | 0.17# (0.09) | 0.03 | -0.27** (0.09) | 0.06** |
| Duration | -0.07 (0.10) | 0.00 | -0.03 (0.10) | 0.00 |
| <u>MUTUAL ASSESSMENTS^b</u> | | | | |
| Satisfaction | 0.64*** (0.10) | 0.42*** | 0.69*** (0.09) | 0.47*** |
| Mutual satisfaction | 0.68*** (0.10) | 0.46*** | -0.67*** (0.10) | 0.43*** |
| Business performance | 0.50*** (0.12) | 0.24*** | -0.51*** (0.12) | 0.25*** |
| Overall performance | 0.48*** (0.12) | 0.22*** | -0.50*** (0.11) | 0.24*** |
| Survival | 0.31* (0.13) | 0.10* | -0.31* (0.12) | 0.10* |
| Duration | 0.03 (0.13) | 0.00 | -0.10 (0.13) | 0.01 |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 170$ ^b $n = 59$

TABLE 8-2
Relationship dynamics and JV performance:
OLS standardized multiple regression coefficients

| Dependent variables | Trust/Commitment | Conflict | R^2 |
|--|-------------------|--------------------|---------|
| <u>INDIVIDUAL ASSESSMENTS^a</u> | | | |
| Satisfaction | 0.39*** (0.08) | -0.38*** (0.08) | 0.45*** |
| Mutual satisfaction | 0.44*** (0.09) | -0.31*** (0.09) | 0.43*** |
| Business performance | 0.29** (0.10) | -0.30** (0.10) | 0.25*** |
| Overall performance | 0.28** (0.10) | -0.22* (0.10) | 0.19*** |
| Survival | 0.04 (0.11) | -0.25* (0.11) | 0.07* |
| Duration | -0.08 (0.11) | -0.04 (0.11) | 0.00 |
| <u>MUTUAL ASSESSMENTS^b</u> | | | |
| Satisfaction | 0.33** (.11) | -0.47*** (.11) | 0.54*** |
| Mutual satisfaction | 0.42*** (0.12) | -0.39** (0.12) | 0.54*** |
| Business performance | 0.29# (0.15) | -0.32* (0.15) | 0.28*** |
| Overall performance | 0.30* (0.15) | -0.30* (0.15) | 0.30*** |
| Survival | 0.18 (0.16) | -0.19 (0.16) | 0.11* |
| Duration | -0.07 (0.17) | -0.15 (0.17) | 0.01 |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 170$ ^b $n = 59$

Overall, the results supported the hypotheses on the relationships between inter-partner relationship and JV performance. As expected, the presence of trust/commitment and conflict in JVs was found to be positively and negatively related with JV performance, respectively. JVs characterized with extensive trust and commitment, and limited conflict exhibited significantly higher performance. In fact, those JVs appeared to achieve higher business performance and to be more likely to survive, but not to exhibit systematically greater longevity. Parent firms were also more likely to be globally satisfied with their ventures.

Beyond the significance of the results, the magnitude of the regression and adjusted R^2 coefficients suggested that trust/commitment and conflict were strong correlates of JV performance. For mutual assessments, variance explained in satisfaction and mutual satisfaction by trust/commitment and conflict exceeded 0.5, a large proportion for social science research (Nunnally, 1967). In general, regression and adjusted R^2 were of medium or large size, according to Cohen (1977).

2. Control sharing and JV performance

Discussions with parent firm and JV managers revealed that the exercise of control and its division between parent firms were important issues for firms and managers already involved in or contemplating involvement in JVs. For most

respondents, the division of control between parent firms was an essential element of their firm's ability to achieve its objectives. Yet, does the exercise of shared control result in greater JV performance? Informants' comments and responses to this question suggested the following observations.

First, parent firm managers shared a similar perspective of what control sharing meant in JVs. Essentially, control sharing involves a joint decision making process, the joint approval of JV management's decisions, as well as the joint evaluation of these decisions and the JV's results. It also includes extensive consultation or exchanges of information between parent firm managers, and between them and the JVGM. The objective of this consultation is not only to inform the partner of the firm's intentions. It serves also to get a second opinion, to smooth away possible differences, and to maintain or to further develop consensus among partners. This was the case even for areas or activities of JVs placed *a priori* under the responsibility of one of the parent firms.

Furthermore, JV boards of directors were viewed as playing a different role in the management of ventures with extensive control sharing. For instance, in their early months and their start-up phase, these JVs appeared to involve more frequent board meetings. Up to 12 meetings a year were noted in some cases, although this number decreased significantly afterwards, with one or two yearly meetings becoming the norm after more than two years of operation. In addition, the agenda of these meetings, often set jointly or by a joint steering

committee, generally encompassed a variety of operational and strategic issues. Between board meetings, there were also frequent discussions and exchanges of all sorts among parent firms and JV managers, and between parent firm managers. In contrast, board meetings seemed less frequent in JVs with limited control sharing. Their agenda was most often set by the dominant partner, and focused on the review of the JV's performance and the approval of budget and capital expenditures. In these ventures, the role played by the board in the operations of shared control JVs was assumed by one or more managers from the dominant partner.

Second, parent firm informants expressed clear preferences toward the exercise of shared control, in comparison to being in the position of the "dominated" or passive partner firm. This attitude may reveal that managers insist that their equity investment receives proper attention. It may also reflect their legitimate desire "to be in control". This preference toward control sharing does not suggest that parent control over all the different decisions of JVs should be divided in the same way. In dividing control, parent firms suggested that serious attention was given to the respective contributions, competencies and expertise of each parent firm and their management team. These comments were consistent with the identification of distinct control patterns for different dimensions and activities of JVs. It also reflects a conscious use of split control structures.

Despite apprehension toward being the passive partner, some firms appeared to be satisfied with this position. This was the case for parent firms for which the excellent performance of the ventures reduced their interest in exercising a significant extent of control. Essentially, these firms appeared satisfied with the existing control structure because of the JVs' financial results. Similarly in vertical JVs, those involving supplier and buyer firms, the passive partners' main contribution to the JV was most often limited to financial resources and a secure outlet for the JV's products. These firms also acknowledged that these ventures were operating in industries unrelated to their own domain. They made very clear that they did not necessarily possess the required expertise for its management. In sum, these cases supported some of Killing's (1982) prescriptions regarding the use of dominant control structures. Indeed, Killing suggested that the parent firm with skills unnecessary to the JV's success should remain passive, while its partner with the required resources should exercise dominant control.

Third, the use of shared control was associated with different benefits. For instance, the division of control was thought to have an important influence on the quality and dynamics of the inter-partner relationships, an influence which is further discussed in the following section. In addition, informants underlined the ability to draw on the expertise and competencies of both parent firms as a clear benefit of the sharing of control. As observed by Killing (1982), such a process is expected to result in better decisions than if the decisions had been left to

either one of the parent firms. By extension, control sharing is also expected to enable the JV to make a more effective use of its resources, and thus, to achieve greater success.

Nevertheless, reliance on control sharing is not without shortcomings. For some informants, control sharing often involved slower, time-consuming and cumbersome decision making. For example, in a situation of control sharing, capital expenditures and investments were submitted to two distinct approval processes. The costs or drawbacks of control sharing were thought to be more evident early in the life of a JV, when parent firms and JV managers are still learning to work together. At that time, they are also working on elaborating common, or at least compatible, approaches and procedures for decision making, reporting and communication processes. Yet, several firms indicated that they were able to establish in a reasonable amount of time compatible approaches and procedures, and thus, to reduce the costs associated with sharing control. As one would expect, this was especially the case for JV-experienced firms.

Responses to the drawbacks of control sharing, or attempts at reducing the related costs, were also structural. In particular, parent firms often relied on the creation of an executive committee which included one (sometimes two) senior managers from each partner. The individual selected typically became the manager responsible for the JV and to whom the JVGM reported in the parent

firm organization. This executive committee was responsible for decisions requiring immediate consideration or related to operational issues. This committee was thought to facilitate communication among parent managers and with the JVGM. Indeed, in several JVs, extensive and frequent communication was observed between the JVGM and the members of the committee. Weekly exchanges were not unusual. The existence of the committee also simplified the decision making process, and ultimately, enhanced the speed and effectiveness of decision making. Fewer decisions and issues were also required to be considered to the board, thereby reducing the number of board meetings and the related administrative costs.

Furthermore, this committee was described as offering a platform where partners could exchange information, negotiate and smooth away possible disagreements about initiatives and issues related to the operations, performance and strategy of the JV. Issues or initiatives negotiated or approved at that level could then be forwarded to the parent firms or the board of directors for ratification. Within this perspective, the executive committee was believed to play an important role in the development of consensus between parent firms, and therefore, in the effective implementation of the JV's strategy.

Thus, while control sharing seemed to involve a cost, informants suggested that firms, and especially JV-experienced ones, were able to develop processes and structures that enabled them to compensate at least partly for its

shortcomings. In addition, the positive impact of control sharing on inter-partner relationships, as we will discuss later in this study, was thought to compensate further for these costs. In sum, the development of appropriate structures and processes as well as the presence of better inter-partner relationships appeared to enable firms to minimize the costs associated with control sharing, while reaping the largest part of its benefits.

Hypothesis testing

The relationship between control sharing and JV performance was further examined by testing Hypothesis 4 which proposed that an increase in control sharing would result in an increase in JV performance. This hypothesis was tested using multiple regression analysis. Results are presented in Table 8-3.

Results indicated that this hypothesis received mixed empirical support. Control sharing, and in particular the sharing of operational control, was found to have a positive relationship with JV performance. For individual assessments, the sharing of operational control was found to be significantly associated with the constructs of satisfaction ($\beta = 0.17$; $p < 0.05$), mutual satisfaction ($\beta = 0.18$; $p < 0.05$), and especially with business performance ($\beta = 0.29$; $p < 0.001$), and overall performance ($\beta = 0.25$; $p < 0.001$). Results were not significant for relationships with objective measures of performance such as survival ($\beta = 0.04$) and duration ($\beta = -0.10$).

In turn, the sharing of technological and strategic control appeared to correlate weakly with JV performance: several regression coefficients for technological and strategic control were under 0.1. In contrast to what was expected, all three control sharing constructs were found to be negatively associated with duration. This negative relationship was significant in the case of strategic control ($\beta = -0.16$; $p < 0.05$). Similarly, some relationships between the sharing of technological control and performance were also in a direction contrary to what was hypothesized, although not significant.

Results for aggregated data were also mixed. Although in the expected direction, and frequently greater than those obtained for individual assessments, several regression coefficients were not significant. The sharing of operational control exhibited a significant relationship only with business performance ($\beta = 0.28$; $p < 0.05$) and overall performance ($\beta = 0.25$; $p < 0.05$), while coefficients for satisfaction ($\beta = 0.19$) and mutual satisfaction ($\beta = 0.20$) were significant at the 0.10 level only. The sharing of strategic control also showed a negative relationship with duration ($\beta = -0.26$; $p < 0.05$) and a positive one with satisfaction ($\beta = 0.23$; $p < 0.05$), while other results were not significant.

Further analysis examined relationships between control sharing and single items of the performance constructs (See Table 8-4). Results were generally similar to those obtained with JV performance constructs. They confirmed the importance of operational control and the limited role of strategic

TABLE 8-3
Control sharing and JV performance:
OLS standardized regression coefficients

| Dependent Variables | Control sharing | | | R ² |
|---|---------------------|-----------------------|-------------------|----------------|
| | Operational Control | Technological Control | Strategic Control | |
| <u>INDIVIDUAL ASSESSMENTS^a</u> | | | | |
| Satisfaction | 0.17* (0.08) | -0.01 (0.08) | 0.14# (0.08) | 0.03* |
| Mutual satisfaction | 0.18* (0.08) | 0.02 (0.08) | 0.06 (0.08) | 0.02 |
| Business performance | 0.29*** (0.08) | -0.08 (0.08) | 0.07 (0.08) | 0.08** |
| Overall performance | 0.25*** (0.08) | -0.08 (0.08) | 0.04 (0.08) | 0.05** |
| Survival | 0.04 (0.08) | -0.00 (0.08) | 0.08 (0.08) | 0.01 |
| Duration | -0.10 (0.08) | -0.04 (0.08) | -0.16* (0.08) | 0.02 |
| <u>MUTUAL ASSESSMENTS^b</u> | | | | |
| Satisfaction | 0.19# (0.11) | 0.01 (0.11) | 0.23* (0.11) | 0.05# |
| Mutual satisfaction | 0.20# (0.11) | 0.06 (0.11) | 0.16 (0.11) | 0.03 |
| Business performance | 0.28* (0.11) | -0.08 (0.11) | 0.09 (0.11) | 0.06# |
| Overall performance | 0.25* (0.11) | -0.08 (0.11) | 0.07 (0.11) | 0.03 |
| Survival | 0.05 (0.12) | 0.04 (0.12) | 0.13 (0.12) | 0.02 |
| Duration | -0.16 (0.11) | -0.12 (0.11) | -0.26* (0.11) | 0.06* |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 172$ ^b $n = 61$

and technological control in explaining JV performance. For instance, the sharing of operational control displayed significant positive coefficients with most performance items, except for satisfaction with the JV's performance and profitability performance. The sharing of strategic control was also significantly correlated with the satisfaction with the JV's performance ($\beta = 0.17$; $p < 0.05$). Furthermore, technological control sharing was negatively associated with several single dimensions of performance, although this relationship was significant at the 0.05 level only for sales performance ($\beta = -0.16$).

Again, the number of significant coefficients was limited for mutual assessments (Table 8-5). Operational control maintained significant relationships with mutual satisfaction with the JV, and with dimensions of business performance such as marketing, distribution, management of the JV, and overall performance. Regression coefficients for technological control were mostly in the expected direction, and significant in the case of process performance ($\beta = 0.22$; $p < 0.05$). The sharing of strategic control was also found to have a significant positive relationship with satisfaction with the JV ($\beta = 0.25$; $p < 0.05$).

In sum, these results provided mixed empirical support for the hypothesized positive relationships between control sharing and JV performance. Particularly in the case of operational control, Hypothesis 4a received some support. Hypothesis 4b was partially supported, when considering both strategic and operational control. In these results, operational control also appeared to be

TABLE 8-4
Control sharing and individual performance items:
OLS standardized regression coefficients; Individual assessments
(n = 172)

| Dependent Variables | Control sharing | | | R^2 |
|-------------------------------|---------------------|-----------------------|-------------------|--------|
| | Operational Control | Technological Control | Strategic Control | |
| SATISFACTION | | | | |
| JV | 0.17* (0.08) | -0.04 (0.08) | 0.13# (0.08) | 0.03* |
| JV's performance | 0.11 (0.08) | -0.09 (0.08) | 0.17* (0.08) | 0.03* |
| Relationship between partners | 0.16* (0.08) | 0.10 (0.08) | 0.07 (0.08) | 0.02# |
| MUTUAL SATISFACTION | | | | |
| JV | 0.17* (0.08) | 0.07 (0.08) | 0.08 (0.08) | 0.02# |
| JV's performance | 0.14# (0.08) | -0.07 (0.08) | 0.10 (0.08) | 0.02# |
| Relationship between partners | 0.19* (0.08) | 0.08 (0.08) | -0.02 (0.08) | 0.02# |
| BUSINESS PERFORMANCE | | | | |
| Technology/eng. of product | 0.18* (0.08) | -0.02 (0.08) | 0.07 (0.08) | 0.02# |
| Process | 0.21** (0.08) | 0.02 (0.08) | 0.07 (0.08) | 0.03* |
| Manufacturing | 0.19* (0.08) | -0.04 (0.08) | 0.04 (0.08) | 0.02# |
| Marketing | 0.25* (0.07) | -0.07 (0.07) | 0.08 (0.07) | 0.06** |
| Distribution | 0.28*** (0.07) | -0.04 (0.07) | 0.06 (0.07) | 0.08** |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

TABLE 8-4 Con't.

| Dependent Variables | Control sharing | | | R^2 |
|--------------------------------------|---------------------|-----------------------|-------------------|---------|
| | Operational Control | Technological Control | Strategic Control | |
| BUSINESS PERFORMANCE (CON'T.) | | | | |
| Sales | 0.17* (0.07) | -0.16* (0.07) | -0.03 (0.07) | 0.04* |
| Profitability | 0.13# (0.08) | -0.14# (0.08) | 0.03 (0.08) | 0.02# |
| Market share | 0.15* (0.08) | -0.10 (0.08) | 0.08 (0.08) | 0.02# |
| Management of the JV | 0.33*** (0.07) | 0.04 (0.07) | 0.08 (0.07) | 0.10*** |
| Overall performance | 0.25*** (0.07) | -0.08 (0.07) | 0.04 (0.07) | 0.05** |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

the most important control construct for performance. The effects associated with the sharing of technological and strategic control were most often not significant. Some results for these constructs also conflicted with hypothesized relationships. Nevertheless, the overall relationship between control sharing and JV performance was considered to be of small magnitude, with regression coefficients almost always below 0.3, and adjusted R^2 seldom exceeding 0.09. These results suggest that factors other than control sharing are more important in explaining JV performance.

TABLE 8-5
Control sharing and individual performance items:
OLS standardized regression coefficients; Mutual assessments
(n = 61)

| Dependent Variables | Control sharing | | | R^2 |
|-------------------------------|---------------------|-----------------------|-------------------|-------|
| | Operational Control | Technological Control | Strategic Control | |
| SATISFACTION | | | | |
| JV | 0.13 (0.11) | 0.16 (0.11) | 0.25* (0.11) | 0.07* |
| JV's performance | 0.11 (0.11) | 0.05 (0.11) | 0.20# (0.11) | 0.02 |
| Relationship between partners | 0.16 (0.11) | 0.11 (0.11) | 0.15 (0.11) | 0.02 |
| MUTUAL SATISFACTION | | | | |
| JV | 0.26* (0.11) | 0.19# (0.11) | 0.15 (0.11) | 0.09* |
| JV's performance | 0.18 (0.11) | 0.11 (0.11) | 0.16 (0.11) | 0.03 |
| Relationship between partners | 0.22# (0.11) | 0.20# (0.11) | 0.02 (0.11) | 0.05# |
| BUSINESS PERFORMANCE | | | | |
| Technology/eng. of product | 0.11 (0.11) | 0.15 (0.11) | 0.11 (0.11) | 0.01 |
| Process | 0.19# (0.11) | 0.22* (0.11) | 0.07 (0.11) | 0.05# |
| Manufacturing | 0.15 (0.11) | 0.20# (0.11) | 0.01 (0.11) | 0.02 |
| Marketing | 0.26* (0.11) | 0.02 (0.11) | 0.10 (0.11) | 0.04 |
| Distribution | 0.25* (0.11) | 0.10 (0.11) | 0.07 (0.11) | 0.04 |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

TABLE 8-5 Con't.

| Dependent Variables | Control sharing | | | R^2 |
|--------------------------------------|---------------------|-----------------------|-------------------|-------|
| | Operational Control | Technological Control | Strategic Control | |
| BUSINESS PERFORMANCE (CON'T.) | | | | |
| Sales | 0.17 (0.12) | -0.06 (0.12) | -0.00 (0.12) | 0.00 |
| Profitability | 0.10 (0.12) | -0.05 (0.12) | 0.03 (0.12) | 0.01 |
| Market share | 0.12 (0.12) | -0.02 (0.12) | 0.11 (0.12) | 0.01 |
| Management of the JV | 0.29** (0.11) | 0.09 (0.11) | 0.15 (0.11) | 0.08* |
| Overall performance | 0.23* (0.11) | 0.07 (0.11) | 0.05 (0.11) | 0.02 |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

3. Control sharing and relationship dynamics

While the relationship between control sharing and JV performance may have appeared difficult to establish, the division of control and the extent to which control was shared between parent firms appeared to play a significant role in the dynamics of their relationship. In particular, informants described the presence of control sharing as a major commitment- and trust-building mechanism. Shared control was associated with several types of behaviors and actions, such as the willingness to make decisions openly and jointly, to seek

input from the partner, to share information, to ensure that the partner felt an involvement in decision making. These actions and behaviors, as well as the presence of extensive control sharing, were portrayed as supporting the development of mutual trust and an atmosphere of genuine cooperation. Both parent firms' involvement in decision making also served to secure their mutual commitment to major decisions and orientations of their JVs. As a result, inter-partner relationships in these ventures were described as trustful.

It is important to note that these observations do not suggest that the development of trust is inconceivable in dominant control JVs. In fact, in JVs dominated by one partner, one trust-building mechanism seemed omnipresent: an intensive and continuous flow of information toward the passive partner. The supply of information by the dominant parent about the JV was perceived as critical to avoid arousing the suspicion of the passive partner, and the consequent possibility of misunderstandings and ultimately of conflict. In contrast to shared control JVs, where the exchange of information was described as an integral part of the sharing of control, formal mechanisms of communication received considerable attention in dominant control JVs. Nevertheless, the situations of dominant and shared control JVs underline the particular role of communication and information exchanges as a trust-building mechanism.

In addition, although it was not expected to eliminate all possibilities of disagreements, the use of control sharing was believed to reduce the occurrence

of major conflicts between partners. As was the case for trust, the extensive inter-partner communication associated with control sharing appeared to allow a better understanding of parent firms' respective positions, objectives as well as apprehensions. Extensive communication was supposed to limit the risks of disagreements and misunderstandings, as well as to permit solutions before they became major conflicts.

In contrast, the presence of dominant control was described as being possibly conducive to conflict. In particular, the partner firm's insistence on exercising dominant control was perceived as a major factor of conflict in JVs. Similar comments were made about unilateral actions by the dominant partner firms. On this issue, one parent firm informant stated:

"Our problems began with [our partner] demanding to have complete responsibility for the management of the JV. They simply didn't know the market we were targeting. Despite our objections, they stuck to their guns. (...) Not surprisingly, the JV's results were horrible, well under targets, and they just made matters worse. Our relationship became so bad with [our partner] that we simply decided to get out, even though we thought that the business was salvageable."

Similar situations were found in the case of on-going JVs where the change from shared control to dominant control was followed by increasing conflict and mistrust. The JVGMs and parent firm managers also underlined an evident and progressive loss of interest and commitment toward the JV within the passive partners' organization as one important impact of the change in the

division of control. In fact, these examples and cases of other dominant control JVs suggest that a passive position in a JV could be harmful for a parent firm's commitment and interest, and increase its psychological distance vis-a-vis its JV. In well-performing ventures, this situation may not be particularly problematic. However, faced with performance problems, the passive partner may express less determination in providing the resources required for the JV's turnaround, or in increasing its resources commitment to the venture. In conclusion, comments suggested that the division of control could have an influence on the dynamics of the relationship between parent firms.

Hypothesis testing

This association between the division of control, specifically the extent of control sharing, and inter-partner relationship dynamics was further examined with the testing of Hypotheses 5/6 and 7, using multiple regression analysis. Hypotheses 5/6 and 7 stated that an increase in control sharing will result in an increase in trust/commitment, and a decrease in conflict, respectively.

These hypotheses received partial empirical support, and results paralleled those obtained for JV performance (See Table 8-6). In particular, the sharing of operational control was found to have a significant and positive relationship with trust/commitment ($\beta = 0.27$; $p < 0.01$) and a negative one with conflict ($\beta = -0.24$; $p < 0.01$). For mutual assessments, the sharing of operational

TABLE 8-6
Control sharing and relationship dynamics:
OLS standardized regression coefficients

| Dependent Variables | Control sharing | | | R^2 |
|---|---------------------|-----------------------|-------------------|--------|
| | Operational Control | Technological Control | Strategic Control | |
| <u>INDIVIDUAL ASSESSMENTS^a</u> | | | | |
| Trust/Commitment | 0.27** (0.09) | 0.14 (0.09) | 0.07 (0.09) | 0.09** |
| Conflict | -0.24** (0.07) | 0.08 (0.07) | -0.07 (0.07) | 0.06** |
| <u>MUTUAL ASSESSMENTS^b</u> | | | | |
| Trust/Commitment | 0.29* (0.12) | 0.17 (0.12) | 0.08 (0.12) | 0.13* |
| Conflict | -0.32* (0.13) | 0.06 (0.13) | -0.14 (0.13) | 0.08# |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$

^a $n = 170$ ^b $n = 59$

control was found to be a significant correlate of trust/commitment ($\beta = 0.29$; $p < 0.05$) and conflict ($\beta = -0.32$; $p < 0.05$). In turn, as had often been the case for JV performance, regression coefficients for relationships between technological and strategic control and relationship dynamics constructs were not significant.

In sum, these analyses at least partly confirmed earlier observations on the association between control sharing and inter-partner relationship dynamics. Essentially, control sharing and especially the sharing of operational control, appeared to be positively associated with trust/commitment, and negatively with conflict.

4. Discussion

The above discussion and analyses provided some evidence regarding the nature and strength of the relationships linking control sharing, relationship dynamics constructs, and JV performance which are worth noting. From these results and evidence, it is possible to draw some conclusions. First, relationship dynamics variables such as trust, commitment and conflict represented important correlates of JV performance. As proposed in Hypotheses 1/2 and 3, the presence of mutual trust/commitment and limited conflict in JVs was associated with higher performance. JVs with greater trust/commitment and less conflict were more successful overall and more likely to meet their parent firms' performance expectations. In these JVs, parent firms also expressed greater individual and mutual satisfaction with the JV, its performance and the relationship between partners. The absence of inter-partner conflict also increased the possibilities of survival. In sum, the above evidence provided further support to the existing literature and reinforced the considerable importance of the quality and dynamics of inter-partner relationship dynamics in

explaining JV performance.

Second, the empirical support provided for Hypotheses 5/6 and 7 suggested a significant relationship between control sharing and relationship dynamics constructs. The critical management issue that needs to be addressed is the identification of the process or behaviors which may result in the development of trust, commitment and the avoidance of conflict, beyond the mere importance of these variables for JV performance. From this perspective, the exercise of shared operational control may be interpreted as being one of the approaches parent firms may implement to support the development of mutual trust and commitment, and to reduce the risk of conflicts. Indeed, reliance on operational control sharing was positively related with mutual trust/commitment and negatively related with the frequency of conflict. A parent firm's trust/commitment was also found to be closely linked to its perception of operational control of the JV being shared.

Third, the hypothesis proposing a positive relationship between control sharing and JV performance received mixed support. In particular, the sharing of operational control was found to be positively related to the business and overall performance of JVs. Greater operational control sharing was also associated with greater performance in terms of marketing, distribution and the general management of JVs. This result for the management of the JV was thought to be logical since both parent firms could be expected to give higher

evaluations of the JV's management when they exercise influence and control over JVs. This control ensured that the JV was managed in ways consistent with their interests and objectives. Regarding marketing and distribution performance, it may be important to consider that several sample JVs involved one parent contributing technological resources while its partner provided marketing resources or market access. For these ventures, excellent business performance and effective marketing efforts are likely to depend on the effective coordination between production/technology and marketing functions. Within this context shared control over operational decisions such as pricing, marketing, distribution and manufacturing may promote, or facilitate, this effective coordination between marketing and production functions. By extension, this would explain the greater business performance, marketing performance and distribution performance associated with the sharing of operational control.

In turn, control sharing was weakly or not significantly related with satisfaction, mutual satisfaction, duration and survival. In fact, the decision to terminate, liquidate or sell out a JV might depend on several factors other than the extent of control sharing at the time of the creation of the venture. This may also be the case for the parent firms' satisfaction. The overall performance of the JV, the achievement of the parent firms' general and specific objectives, or the quality of the relationship between the partners may represent some of the factors which could more effectively explain why parent firms are satisfied, or not, with their venture, and why this JV survives and remains in operation.

Globally, these results suggest that shared control JVs should outperform dominant control ones. The latter ventures should also be associated with better inter-partner relationships, and specifically with greater mutual trust and commitment, and less frequent conflict. To further support this conclusion, the performance and relationship dynamics of these two types of control structures were compared, using the classification of JVs presented in Chapter 7. Results of these comparisons and related *t*-tests (using mutual assessments since this represents a more conservative test) are presented in Table 8-7. These results supported the contention that shared operational control JVs exhibited significantly greater business performance, satisfaction, trust/commitment, and less frequent conflict, but shorter longevity than dominant operational control. Shared technological control was also associated with greater trust/commitment and less longevity, while no significant differences were found between shared and dominant strategic control. When looking at the overall division of control, shared control JVs demonstrated greater satisfaction and trust/commitment, as well as less frequent conflict. In addition, most results, significant or not, were in the expected direction, except for duration and survival.

Fourth, from all these different results, the sharing of operational control appeared to be the most important dimension of control for the performance and inter-partner relationship dynamics of JVs. Seldom, and only weakly, did the sharing of technological and strategic control appear to correlate with these variables. These results do not necessarily suggest that these two dimensions

Table 8.7
Comparison of shared control and dominant control structures
Mutual assessments

| | Operational Control | | Technological control | | Strategic Control | | Overall Control | | t |
|------------------------------|---------------------|----------------|-----------------------|----------------|-------------------|----------------|------------------|----------------|---------|
| | Dominant n=33 | Shared n=28 | Dominant n=44 | Shared n=17 | Dominant n=14 | Shared n=47 | Dominant n=32 | Shared n=29 | |
| JV PERFORMANCE | | | | | | | | | |
| Satisfaction | 3.40 | 4.01 | 2.56* | 3.97 | 3.36 | 3.78 | 3.42 | 3.97 | 2.25* |
| Mutual Satisfaction | 3.04 | 3.45 | 1.71# | 3.54 | 2.95 | 3.31 | 3.08 | 3.39 | 1.28 |
| Business Performance | 3.06 | 3.41 | 2.17* | 3.24 | 3.14 | 3.24 | 3.14 | 3.31 | 1.09 |
| Overall Performance | 2.91 | 3.37 | 2.11* | 3.17 | 3.12 | 3.12 | 3.02 | 3.23 | 0.84 |
| Survival | 0.43 | 0.31 | 1.03 | 0.27 | 0.44 | 0.36 | 0.43 | 0.31 | 1.21 |
| Duration | 12.37 | 8.62 | 2.48* | 7.82 | 13.06 | 9.95 | 13.02 | 8.00 | 3.42*** |
| RELATIONSHIP DYNAMICS | | | | | | | | | |
| Trust/Commitment | 3.59 | 4.20 | 3.01** | 4.24 | 3.72 | 3.90 | 3.61 | 4.15 | 2.61* |
| Conflict | 2.22 | 1.72 | 3.18** | 1.78 | 2.10 | 1.97 | 2.16 | 1.81 | 2.09* |

Standard errors are in parentheses.
$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

of control are of no importance for the performance of JVs. Such a conclusion would ultimately imply that decisions regarding technological matters or capital expenditures have no influence on whether a JV performs well or poorly. However, because of limited variance in the sharing of technological and strategic control, few JVs were classified either as shared technological control or dominant strategic control ventures. Thus, the limited variety in control sharing could explain why these dimensions did not appear to distinguish between well and poorly performing JVs. Therefore, this problem, which is compounded by the study's small sample size, does not allow any firm conclusion regarding the importance of these dimensions of control sharing.

The limited magnitude of the relationships between the dimensions of control sharing and JV performance may be explained in several ways. For instance, the absence of a significant relationship may be explained by the fact that factors other than control sharing may account for JV performance. Such factors could be related to the competitive structure of the JV's industry, such as industry conditions, industry life or business cycle stage, and competitors' positions and reactions. These factors may have had an influence because of the multi-industry nature of the study's sample. Industry-specific biases may also have been introduced, since the presence of three industries accounted for more than one-third of sample JVs.

In addition, issues of statistical power, and in particular of sample size,

may also be raised to explain some non-significant results obtained for aggregated data. When aggregated data were used, regression coefficients were often the same size or greater than those obtained from individual data. Yet, these coefficients were not significant at the 0.05 level, though several had significance levels between 0.10 and 0.05. This is true of the relationship between the sharing of operational control and financial performance, for instance. With a smaller sample, reduced power may explain why coefficients of the same or greater magnitude were not significant at the 0.05 level.

Of course, it may be possible that the extent to which control is shared may not represent the important determinant of JV performance which was expected and was suggested by the JV literature. Nevertheless, it is also possible that the presence of a selection bias toward surviving JVs may have affected the strength of the relationship linking control sharing to performance and relationship dynamics variables. This sample included JVs created at different periods but still in operation in 1985. Some JVs had been in operation for more than 20 years. This sample characteristic may have introduced biases or intervening variables related to selection, history, or maturity effects (e.g., Cook and Campbell, 1979). These variables may include JV age and the relationship between partners, as well as changes in the attractiveness of the JV's business or in the parent firms' motivations. Significant correlations between age and business performance may also serve as an example of possible bias or intervening effect.

To control for potential biases associated with this characteristic of the sample, and to rule out related alternative explanations, complementary analyses were carried out. Identical to earlier analyses conducted for the whole sample, these analyses used a sub-sample which included only JVs formed since 1980. As in the case of correlations between objective and perceptual measures of performance, this sample included JVs formed more recently and in a narrower time frame. It was expected that examination of the sub-sample for individual ($n = 108$) and aggregated data ($n = 41$) would at least partially control for potential biases which could be present in the sample. Results are discussed below.

The case of recently-formed JVs

Regression coefficients between the sharing of operational control and performance constructs were larger than in initial analyses involving the entire sample (See Table 8-8). This situation was noticeable for the relationship between operational control and business performance. Regression coefficients reached 0.47 ($p < 0.001$) for individual assessments, and 0.52 ($p < 0.001$) for mutual assessments. Significant relationships were observed between the sharing of operational control and overall performance, as well as mutual satisfaction. Relationships between control sharing and duration were not significant, and in a direction contrary to what had been hypothesized. Except for the sharing of strategic control and individual satisfaction, the two other dimensions of control were not related to any of the performance constructs.

TABLE 8-8
Control sharing and JV performance
OLS standardized regression coefficients; JVs formed since 1980

| Dependent Variables | Control sharing | | | R^2 |
|--|---------------------|-----------------------|-------------------|---------|
| | Operational Control | Technological Control | Strategic Control | |
| <u>INDIVIDUAL ASSESSMENTS^a</u> | | | | |
| Satisfaction | 0.25** (0.09) | 0.03 (0.09) | 0.19* (0.09) | 0.07* |
| Mutual satisfaction | 0.27** (0.09) | 0.01 (0.09) | 0.15 (0.09) | 0.06* |
| Business performance | 0.47*** (0.08) | -0.07 (0.08) | 0.07 (0.08) | 0.21*** |
| Overall performance | 0.34*** (0.09) | -0.09 (0.09) | 0.03 (0.09) | 0.10** |
| Survival | -0.03 (0.10) | 0.13 (0.10) | 0.06 (0.10) | 0.01 |
| Duration | -0.04 (0.10) | -0.10 (0.10) | -0.03 (0.10) | 0.00 |
| <u>MUTUAL ASSESSMENTS^b</u> | | | | |
| Satisfaction | 0.26# (0.14) | 0.10 (0.14) | 0.21 (0.14) | 0.05 |
| Mutual satisfaction | 0.29* (0.14) | 0.08 (0.14) | 0.11 (0.14) | 0.04 |
| Business performance | 0.52*** (0.12) | 0.01 (0.12) | 0.03 (0.12) | 0.22** |
| Overall performance | 0.38** (0.14) | 0.01 (0.14) | 0.01 (0.14) | 0.08# |
| Survival | 0.00 (0.15) | 0.14 (0.15) | 0.03 (0.15) | 0.02 |
| Duration | -0.07 (0.15) | -0.14 (0.15) | -0.09 (0.15) | 0.03 |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 108$ ^b $n = 41$

Relationships between the sharing of operational control and trust/commitment were also stronger for individual ($\beta = 0.44$; $p < 0.001$) and mutual assessments ($\beta = 0.31$; $p < 0.05$). However, the negative relationship between the sharing of operational control and conflict was significant only in the case of individual assessments. For mutual assessments, the regression coefficient ($\beta = -0.28$) was significant only at the 0.10 level, a result which may be explained by the smaller sample size.

TABLE 8-9
Control sharing and relationship dynamics
OLS standardized regression coefficients; JVs formed since 1980

| Dependent Constructs | Control sharing | | | R^2 |
|--|------------------------|--------------------------|----------------------|-------|
| | Operational Control | Technological Control | Strategic Control | |
| <u>INDIVIDUAL ASSESSMENTS^a</u> | | | | |
| Trust/Commitment | 0.31** (0.11) | 0.00 (0.11) | 0.12 (0.11) | 0.06# |
| Conflict | -0.20* (0.09) | 0.04 (0.09) | -0.15 (0.09) | 0.04# |
| <u>MUTUAL ASSESSMENTS^b</u> | | | | |
| Trust/Commitment | 0.37* (0.15) | 0.09 (0.15) | 0.02 (0.15) | 0.08 |
| Conflict | -0.28# (0.15) | 0.00 (0.15) | -0.24 (0.15) | 0.05 |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 108$ ^b $n = 41$

Comparisons between shared and dominant control structures and t-tests were also performed (See Table 8-10). As in regression analysis, the results showed that the relationships linking the sharing of operational control to JV performance and trust/commitment was stronger in recently-formed JVs than in older ones. Accordingly, recently-formed JVs with shared operational control exhibited higher business and overall performance, and were characterized by greater mutual trust/commitment, and less conflict. Shared technological control was also associated with greater satisfaction and mutual trust/commitment.

Concluding remarks

The above results suggested that the relationship between control sharing, specifically the sharing of operational control, and JV performance was stronger in recently-formed JVs. In particular, the sharing of operational control emerged as a strong correlate of business performance, at least according to Cohen's (1977) effect size scale.

Essentially, these results suggest that the control sharing structure of recently-formed JVs, or how the parent firms organize their management, is a more important determinant of their performance, compared to older, more established ventures. In these JVs, a variety of factors may play a greater role in explaining performance in comparison to how control was divided between parent firms at their formation, several years before. Such factors could include

Table 8-10
Comparison of shared control and dominant control structures
Mutual assessments; JVs formed since 1980

| | Operational Control | | Technological control | | Strategic Control | | Overall Control | | t |
|------------------------------|---------------------|------------------|-----------------------|------------------|--------------------|------------------|--------------------|------------------|-------|
| | Dominant n = 33 | Shared n = 28 | Dominant n = 44 | Shared n = 17 | Dominant n = 14 | Shared n = 47 | Dominant n = 32 | Shared n = 29 | |
| JV PERFORMANCE | | | | | | | | | |
| Satisfaction | 3.26 | 4.16 | 2.84** | 4.13 | 3.40 | 3.83 | 3.33 | 4.02 | 2.21* |
| Mutual Satisfaction | 2.79 | 3.48 | 2.25* | 3.58 | 2.86 | 3.22 | 2.91 | 3.33 | 1.26 |
| Business Performance | 2.81 | 3.47 | 4.02*** | 3.33 | 3.16 | 3.19 | 2.91 | 3.36 | 2.39* |
| Overall Performance | 2.61 | 3.40 | 2.67** | 3.22 | 3.20 | 3.03 | 2.77 | 3.23 | 1.41 |
| Survival | 0.36 | 0.25 | 0.85 | 0.22 | 0.38 | 0.29 | 0.37 | 0.26 | 0.79 |
| Duration | 6.41 | 6.71 | 0.36 | 5.89 | 7.25 | 6.45 | 6.26 | 5.74 | 0.62 |
| RELATIONSHIP DYNAMICS | | | | | | | | | |
| Trust/Commitment | 3.47 | 4.28 | 3.29** | 4.29 | 3.78 | 3.90 | 3.57 | 4.10 | 1.89# |
| Conflict | 2.34 | 1.75 | 2.84** | 1.80 | 2.37 | 1.97 | 2.27 | 1.88 | 1.63 |

Standard errors are in parentheses.
$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

past performance, relationships with customers and suppliers, or industry competition. Yet, the division of control at the time of formation may have influenced or may even explain a JV's initial results, but also its original marketing and competitive strategy, its overall competitive position in its business environment, as well as the initial dynamics of the relationship between partner firms. These initial decisions and results could be interpreted as the outcomes from the division of control at the time of formation. In turn, these decisions and results may be at the origin of subsequent results and decisions. Therefore, this reasoning would also propose an iterative relationship between the division of control and JV performance.

Nevertheless, it remains that the extent of control sharing did not exhibit the relationship with JV performance that the literature suggested and that was expected. The sharing of operational control was the only control construct to systematically show significant relationships with different dimensions of JV performance, as well as with relationship dynamics constructs. These results lead to the conclusion that factors other than control sharing may be more effective in explaining the performance and inter-partner relationship dynamics of JVs. The division of control between the parents and the JVs, or the autonomy of the ventures may well represent such a factor. Therefore, the relationships linking autonomy with performance and relationship dynamics variables will be examined in the following chapter.

CHAPTER 9

AUTONOMY, RELATIONSHIP DYNAMICS AND JV PERFORMANCE

This chapter is divided into two main parts. First, it examines the relationships linking autonomy with the relationship dynamics and performance of JVs. The nature of these relationships is discussed and hypotheses regarding these relationships are tested using OLS regression analyses. In the second part, control sharing and autonomy constructs are combined in regression analysis. These analyses permit the assessment of the overall importance of the relationship linking these two dimensions of a JV's division of control structure with relationship dynamics and JV performance variables.

1. Autonomy and JV performance

In contrast to the sharing of control between parent firms, the issue of autonomy in JVs and the relationship between autonomy and JV performance remain largely overlooked in the JV literature. Within this context, discussions with parent firm and JV informants permitted to assess the particular nature of autonomy in JVs as well as of its relationship with performance.

The nature of autonomy in JVs

Consistent with prior research, this study's informants described JVs as generally enjoying greater autonomy than wholly-owned subsidiaries (WOS). This point was raised very clearly by parent firm managers as well as JVGMs and especially those managers who had assumed similar responsibilities previously, in WOS.

Nevertheless, this autonomy needs to be qualified and more precisely defined. While parent and JV managers agreed on the greater autonomy of JVs, this autonomy was especially evident at the strategy formulation stage, in comparison to the implementation stage. JVGMs most often had complete latitude, and greater latitude than in WOS, to seek market, product or business opportunities for their JV. There were generally few or no restrictions limiting them from making proposals regarding investments, new products, markets, customers and other strategic initiatives. As a result, several JVGMs described their work as more entrepreneurial and the JV as more "their" firm than what it would have been the case in WOS. This issue was especially important for JVGMs with general management experience in WOS or business units/divisions.

In turn, significantly less autonomy and latitude was observed in the implementation of these initiatives and proposals. Parent firms were often found

to be significantly involved in, or to be instrumental to, the implementation of accepted projects. The spending authority of JVGMs exemplifies this situation. JVGMs' spending authority was often limited, because of spending limits as well as because of the complexity of the expense approval process. As a result, any proposal needed to receive approval from parent firms, typically from a variety of managers and hierarchical levels within parent firm organizations. The approval process generally involved the JV's board of directors, as well as the senior management of both parent firms. It was described as encompassing extensive negotiation and compromise.

Partly due to the limited spending authority of JVGMs, JVs were found to have limited capacity to undertake most new strategic initiatives by themselves. Typically, they could rely only on the resources required by their on-going and existing activities. Therefore, the effective completion or implementation of JVs' projects often depended on resources provided by parent firms. Of course, this was often the case of capital investments requiring parent firms' financial support. This situation was also evident for technological resources, where new product development or process improvements frequently relied on obtaining technologies from parent firms. When R&D work was required and could not be performed by the JV (a situation frequently encountered), the work was conducted by either or both parent firms. In the case of marketing initiatives, access to markets (domestic or international), distribution channels, or specific customers was often dependant on parent firms' resources or authorization.

In sum, the "extensive" autonomy of JVs appeared to be constrained, or at least well circumscribed by the interdependencies inherent to the nature of JVs. Yet, JVGMs did not describe their situation as involving less, nor a loss of autonomy, but rather as drawing on the parent firms' resources and competencies. Some JVGMs talked of necessary cooperation, some others of coordination, rather than limited autonomy. This cooperation/coordination was seen as a key success for initiatives, even deemed as critical. This was particularly the case for JVs considered as successful. Achieving this cooperation or effective coordination was also described as representing the most serious challenge to a JVGM's diplomatic skills. Nevertheless, this cooperation (or coordination) was believed to reflect the interdependencies existing between parent firms and JVs, and by extension, the increasing strategic character of JVs. As this character and interdependencies increase, greater coordination may become necessary. As explained, this coordination may be essential for the JV to access parents' resources, and for parent firms to ensure effective and efficient use of these resources.

Autonomy and performance

The previous discussion could be interpreted to provide mixed support for the expected positive relationship between the autonomy and the performance of JVs. While some autonomy may be beneficial for JVs, coordination with parent firms may also be required. On this matter, most informants agreed that

limited autonomy could impede a JV's ability to meet its environment's competitive challenges, and to respond rapidly to change. There was a consensus that JVs should be provided with at least minimum levels of independence. As anyone would expect, JVGMs were especially adamant about the necessity of granting autonomy to JVs.

A consensus was more difficult to perceive among parent firm respondents when examining the benefits of different levels of autonomy. In particular, some informants suggested that the optimal extent of autonomy, from the point of view of parent firm management, could be contingent on a JV's relationship with the parent firms' product focus. Within this perspective, some parent firms respondents expressed preferences for extensive autonomy for JVs involving some diversification in comparison to their core activities. In turn, less autonomy was judged preferable for JVs involving core activities. It must be stressed that this viewpoint reflects a preference, or at least the desire to restrict autonomy and maintain authority over core activities. It is not a conclusion regarding the performance of JVs associated with different levels of autonomy.

Finally, there has been some discussion in the JV literature regarding the directionality of the autonomy-performance relationship. Is autonomy the cause or the result of the performance of a JV? Among others, Killing (1982) suggested that autonomy could be a result of performance. Consistent with this author, there was evidence of management responsibilities being almost entirely

assumed by parent firm managers in some poorly-performing JVs. In periods of crisis and difficulty, some JVs appeared to have little or no autonomy. While these cases would tend to support Killing's position, the reciprocal relationship was not observed in well-performing JVs. In fact, several well-performing JVs did not appear to possess greater autonomy, or to acquire autonomy to a greater extent, compared to other ventures. Therefore, comments from informants did not permit definitive conclusions on this issue.

The directionality of this relationship was further explored by examining the correlation between the increase in JVs' autonomy observed through time and their performance. Significant and positive correlations could be interpreted as supporting the contention that a JV's autonomy was the outcome of its good performance. As seen in Table 9-1, only individual assessments of change in operational autonomy were significantly related with business performance. Other coefficients were not significant, although in the expected direction. Similar analysis performed with recently-formed JVs yielded only weaker and non-significant correlations.

In sum, the autonomy acquired by JVs was seldom or poorly related to their performance. Such figures were not consistent with the contention that autonomy was the result of performance. They may also highlight that the progressive increase in autonomy observed in JVs may be associated to other factors than their performance. The time required to achieve "cruising speed" or

TABLE 9-1
Correlations between changes in autonomy and JV performance.

| | <u>Change in autonomy</u> | | |
|--|---------------------------|---------------------------|-----------------------|
| | Operational Autonomy | Technological Autonomy | Strategic Autonomy |
| <u>INDIVIDUAL ASSESSMENTS^a</u> | | | |
| Satisfaction | 0.06 | 0.03 | 0.00 |
| Mutual satisfaction | 0.04 | -0.01 | -0.01 |
| Business performance | 0.19* | 0.13 | 0.10 |
| Overall performance | 0.15# | 0.06 | 0.08 |
| Survival | 0.06 | 0.05 | 0.02 |
| Duration | 0.07 | 0.01 | 0.03 |
| <u>MUTUAL ASSESSMENTS^b</u> | | | |
| Satisfaction | 0.13 | 0.07 | 0.05 |
| Mutual satisfaction | 0.18 | 0.12 | 0.10 |
| Business performance | 0.19 | 0.19 | 0.09 |
| Overall performance | 0.12 | 0.08 | 0.04 |
| Survival | 0.05 | 0.14 | 0.14 |
| Duration | 0.03 | -0.04 | -0.19 |

$p < 0.10$ * $p < 0.05$

^a $n = 145$ ^b $n = 48$

for the institutionalization of the JV, the position within the parents' product and market scope, and whether the JV is a greenfield or the merger of existing operations, are some of the potential intervening variables in this process which can be identified.

Hypothesis testing

The relationship linking autonomy and JV performance was further examined by testing Hypothesis 8 which proposed that an increase in autonomy would result in an increase in performance. This hypothesis received mixed support. Strategic and operational autonomy were found to be positively related with the parent firms' satisfaction (See Table 9-2). Strategic autonomy was also positively associated with business performance ($\beta = 0.20$; $p < 0.05$). Technology autonomy exhibited a positive relationship with survival ($\beta = 0.17$; $p < 0.05$). For mutual assessments, strategic autonomy was correlated with mutual satisfaction ($\beta = 0.38$; $p < 0.01$), business performance ($\beta = 0.30$; $p < 0.05$) and overall performance ($\beta = 0.28$; $p < 0.05$). Results for strategic and technological autonomy were not significant.

In sum, these results provided mixed support to the hypothesized relationship between autonomy and performance. Only strategic autonomy appeared to be related in a systematic and significant manner with JV performance. Thus, strategic autonomy arose as the most important autonomy dimension for JV performance. However, as for control sharing, the mixed results and small magnitude of the observed relationships suggested that autonomy was not an important correlate of JV performance. By extension, factors other than autonomy are likely to represent more important factors of these organizations' performance.

TABLE 9-2
Autonomy and JV performance
OLS standardized regression coefficients

| Dependent Variables | Autonomy | | | R^2 |
|--|----------------------|------------------------|--------------------|---------|
| | Operational Autonomy | Technological Autonomy | Strategic Autonomy | |
| <u>INDIVIDUAL ASSESSMENTS^a</u> | | | | |
| Satisfaction | 0.16* (0.08) | 0.01 (0.08) | 0.16* (0.08) | 0.03* |
| Mutual satisfaction | 0.17* (0.08) | -0.03 (0.08) | 0.26*** (0.08) | 0.08*** |
| Business performance | 0.07 (0.08) | -0.06 (0.08) | 0.20* (0.08) | 0.03* |
| Overall performance | 0.05 (0.08) | 0.08 (0.08) | 0.12 (0.08) | 0.01 |
| Survival | -0.06 (0.08) | 0.17* (0.08) | -0.07 (0.08) | 0.02 |
| Duration | -0.04 (0.08) | -0.01 (0.08) | 0.12 (0.08) | 0.00 |
| <u>MUTUAL ASSESSMENTS^b</u> | | | | |
| Satisfaction | 0.16 (0.13) | 0.11 (0.13) | 0.23# (0.13) | 0.04 |
| Mutual satisfaction | 0.11 (0.13) | 0.16 (0.13) | 0.38** (0.13) | 0.14** |
| Business performance | 0.06 (0.12) | 0.16 (0.12) | 0.30* (0.12) | 0.08* |
| Overall performance | 0.08 (0.13) | 0.07 (0.13) | 0.28* (0.13) | 0.04 |
| Survival | -0.16 (0.12) | 0.23# (0.12) | -0.10 (0.12) | 0.05 |
| Duration | 0.01 (0.13) | -0.14 (0.13) | 0.22# (0.13) | 0.02 |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 170$ ^b $n = 60$

2. Autonomy and relationship dynamics

Comments from informants did not clearly establish the nature of the relationship between autonomy and inter-partner relationship dynamics in JVs. In several ways, the quality and dynamics of the inter-partner relationships did not appear to be strongly related to the extent of autonomy conferred to a JV. In particular, extensive autonomy did not appear to be associated with higher levels of trust, or simply with better inter-partner relationships. However, important tensions and conflicts between partners were suggested to affect and limit the autonomy of JVs. In the presence of serious and frequent conflicts, some ventures were described as being on a "very short leash". Typically, the autonomy of these JVs was seriously restricted. Decision making as well as the implementation of decisions and projects also became more complex and cumbersome.

In sum, the relationship between autonomy and the dynamics of inter-partner relationships was difficult to establish. Nevertheless, in any attempt in that direction, it may be important to remember that JVs are not shielded from difficulties in inter-parent relationships. Particularly in serious confrontational circumstances, these difficulties may have repercussions on the extent of autonomy conferred to JVs. These repercussions are likely to involve a reduction in autonomy.

Hypothesis testing

Hypotheses 9/10 and 11 suggested that an increase in autonomy would result in an increase in trust/commitment and a decrease in conflict, respectively. As was the case in the above discussion, regression analysis did not provide strong evidence supporting these hypotheses (See Table 9-3). Essentially, both individual and aggregated assessments of autonomy were not significantly related with trust. Similarly, only individual assessments of strategic autonomy exhibited a significant relationship with conflict. In conclusion, these results did not support the existence of a relationship between autonomy and inter-partner relationship dynamics.

3. Discussion

Globally, the above results suggested that strategically autonomous JVs should be characterized by greater performance. In these ventures, parent firms should also express greater satisfaction. Nevertheless, one could suggest that these results also mirrored those obtained for control sharing. Indeed, analyses provided mixed evidence supporting the positive relationship between autonomy and performance in JVs. A single dimension of autonomy, strategic autonomy, was found to be associated in a more systematic way with the business and overall performance of JVs, while results for the two other dimensions were most often non-significant. However, in contrast to control sharing, the dimensions of

TABLE 9-3
Autonomy and relationship dynamics:
OLS standardized regression coefficients

| Dependent Variables | Autonomy | | | R^2 |
|--|----------------------|------------------------|--------------------|--------|
| | Operational Autonomy | Technological Autonomy | Strategic Autonomy | |
| <u>INDIVIDUAL ASSESSMENTS^a</u> | | | | |
| Trust | 0.09 (0.09) | 0.01 (0.09) | 0.02 (0.09) | 0.00 |
| Conflict | -0.14# (0.08) | -0.04 (0.08) | -0.21** (0.08) | 0.05** |
| <u>MUTUAL ASSESSMENTS^b</u> | | | | |
| Trust/Commitment | 0.10 (0.13) | 0.17 (0.13) | 0.09 (0.13) | 0.00 |
| Conflict | -0.22# (0.12) | -0.19 (0.12) | -0.19 (0.12) | 0.08# |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$

^a $n = 170$ ^b $n = 59$

autonomy did not appear to be significantly related with relationship dynamics variables.

While strategic autonomy appeared as the most important dimension of autonomy, this variable cannot be acknowledged as an important factor of performance and relationship dynamics. Correlations were most often weak, when significant statistically, and related R^2 seldom exceeded 0.10. The

explanation for such results may lie in the fact that factors other than autonomy might be more important determinants of JV performance. Issues of statistical power or sample size may also be invoked. Yet, the presence of a sample bias toward surviving JVs may have affected the magnitude of the relationship observed between autonomy and performance in JVs. Therefore, before drawing any conclusion and in order to control for potential biases, complementary analyses with recently-formed JVs (i.e., formed since 1980) were conducted.

The case of recently-formed JVs

As was the case for the control sharing, regression coefficients between dimensions of autonomy and performance were larger for recently-formed JVs (See Table 9-4). In particular, for mutual assessments, both operational and strategic autonomy were positively and significantly related with overall and business performance. In the latter case, variance explained (R^2) reached 0.26. Operational and strategic autonomy were also significantly related with parent firms satisfaction, although some regression coefficients were significant at the 0.10 level only. In addition, the relationship between technological autonomy and survival was significant and in the expected direction ($\beta = 0.38$; $p < 0.05$).

Finally, as seen in Table 9-5, negative correlations were observed between strategic autonomy and conflict for both individual ($\beta = -0.32$; $p < 0.001$) and mutual assessments ($\beta = -0.41$; $p < 0.01$).

TABLE 9-4
Autonomy and JV performance:
 OLS standardized regression coefficients; JVs formed since 1980

| Dependent Variables | Autonomy | | | R^2 |
|--|----------------------|------------------------|--------------------|---------|
| | Operational Autonomy | Technological Autonomy | Strategic Autonomy | |
| <u>INDIVIDUAL ASSESSMENTS^a</u> | | | | |
| Satisfaction | 0.22* (0.09) | -0.08 (0.09) | 0.20* (0.09) | 0.07* |
| Mutual satisfaction | 0.22* (0.09) | -0.17 (0.09) | 0.24* (0.09) | 0.11** |
| Business performance | 0.20* (0.09) | -0.20* (0.09) | 0.28* (0.09) | 0.14*** |
| Overall performance | 0.14 (0.09) | -0.18* (0.09) | 0.20* (0.09) | 0.07* |
| Survival | 0.01 (0.10) | 0.22* (0.10) | 0.04 (0.10) | 0.03 |
| Duration | -0.15 (.10) | 0.01 (.10) | -0.05 (.10) | 0.00 |
| <u>MUTUAL ASSESSMENTS^b</u> | | | | |
| Satisfaction | 0.32# (0.14) | -0.07 (0.14) | 0.37# (0.14) | 0.17* |
| Mutual satisfaction | 0.27# (0.14) | -0.03 (0.14) | 0.39* (0.14) | 0.16* |
| Business performance | 0.34* (0.14) | -0.07 (0.14) | 0.46** (0.14) | 0.26** |
| Overall performance | 0.29* (0.14) | -0.08 (0.14) | 0.40** (0.14) | 0.18* |
| Survival | -0.14 (0.15) | 0.38* (0.15) | -0.01 (0.15) | 0.08# |
| Duration | 0.02 (0.16) | -0.29# (0.16) | 0.06 (0.16) | 0.01 |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$

^a $n = 108$ ^b $n = 41$

TABLE 9-5
Autonomy and relationship dynamics
OLS standardized regression coefficients; JVs formed since 1980

| Dependent Variables | Autonomy | | | R^2 |
|---|----------------------|------------------------|--------------------|--------|
| | Operational Autonomy | Technological Autonomy | Strategic Autonomy | |
| <u>INDIVIDUAL ASSESSMENTS^a</u> | | | | |
| Trust | 0.22# (0.12) | -0.12 (0.12) | 0.12 (0.12) | 0.02 |
| Conflict | -0.15 (0.09) | 0.02 (0.09) | -0.32*** (0.09) | 0.10** |
| <u>MUTUAL ASSESSMENTS^b</u> | | | | |
| Trust | 0.17 (0.16) | 0.11 (0.16) | 0.26 (0.16) | 0.04 |
| Conflict | -0.22 (0.15) | -0.06 (0.15) | -0.41** (0.15) | 0.16* |

Standard errors are in parentheses.

$p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

^a $n = 108$ ^b $n = 41$

Concluding remarks

Regarding the nature and strength of the relationship between autonomy and JV performance, preliminary analysis failed to find significant correlations between the increase in autonomy observed through time and their performance. Since well-performing JVs did not appear to acquire more autonomy than poorly-

performing ventures, there was little evidence that autonomy was more the result than the cause of performance in JVs.

Furthermore, the autonomy-performance relationship, and especially the relationship linking operational and strategic autonomy with performance, were found to be of greater magnitude in recently-formed JVs. Therefore, these results provided stronger empirical support to the hypothesized relationship between autonomy and performance. They showed that JVs with greater operational and strategic autonomy typically exhibited higher performance and parent firms' satisfaction. Based on Cohen (1977), operational autonomy and especially strategic autonomy emerged as strong correlates of the business performance and overall performance of JVs.

In comparing results, autonomy appears to be a slightly more important factor of JV performance than control sharing. For instance, variance explained by the dimensions of autonomy was often greater for most performance variables. Furthermore, two dimensions of autonomy, rather than a single one as in the case of control sharing, appeared to share significant relationships with JV performance. However, the study's results did not provide evidence of the overwhelming importance of autonomy for JV performance. The magnitude of the relationships does not rule out the possibility that other factors may be more effective in explaining the performance of these organizations. Autonomy was also found to be of limited significance for the dynamics of inter-partner

relationship in JVs, particularly regarding the emergence of mutual trust.

Nevertheless, beyond the specific nature of the autonomy-performance relationship, results were consistent with the earlier observation regarding the relative importance of the management structure for recently-formed JVs. Essentially, these results further supported the proposition that the division of control structure may represent a more important determinant of performance in recently-formed JVs than in older, more established ventures. As discussed earlier, the performance of these organizations may be the result of several intervening variables, besides the division of control at the time of the formation.

4. Control sharing and autonomy

Discussions and analyses have so far focused on the respective explanatory power of control sharing and autonomy. This section presents analyses where the dimensions of control sharing and autonomy are combined. These analyses permit the assessment of the overall and relative importance of these dimensions of division of control structure for the performance of JVs and dynamics of inter-partner relationship.

Control sharing, autonomy and performance

Results of OLS regression analysis combining constructs of control

sharing and autonomy uncovered few surprises (See Tables 9-6 and 9-7). These results confirmed the prominence of operational control sharing and strategic autonomy. These two dimensions of the division of control structure were found to be significantly correlated with most perceptual measures of performance. For instance, operational control sharing and strategic autonomy were positively and significantly correlated with mutual satisfaction and business performance. In contrast, no significant relationships were observed with objective measures such as survival and duration. Essentially, results confirmed that JVs with greater strategic autonomy and where control over operational activities and decisions was shared generally exhibited greater performance.

Nevertheless, these results again revealed the limited importance of control sharing and autonomy for JV performance. Despite some significant results, variance explained (R^2) remained modest in most cases, never exceeding 0.15 for instance. Therefore, these two dimensions of a JV's division of control structure did not appear to be critical factors of performance.

Control sharing, autonomy and relationship dynamics

Results for relationships involving relationship dynamics variables did not reveal surprises either (See Table 9-8). Results were mixed and few regression coefficients were significant. Essentially, the sharing of operational control was positively related with the presence of individual and mutual trust. Conflict also

TABLE 9-6
Control sharing, autonomy and JV performance
OLS standardized regression coefficients; Individual assessments
(n = 170)

| Dependent Variables | Control sharing | | | Autonomy | | | R ² |
|----------------------|---------------------|-----------------------|-------------------|----------------------|------------------------|--------------------|----------------|
| | Operational Control | Technological Control | Strategic Control | Operational Autonomy | Technological Autonomy | Strategic Autonomy | |
| Satisfaction | 0.17* (0.07) | -0.03 (0.07) | 0.14* (0.07) | 0.13# (0.07) | 0.04 (0.07) | 0.17* (0.07) | 0.07** |
| Mutual satisfaction | 0.18* (0.07) | 0.01 (0.07) | 0.06 (0.07) | 0.16* (0.07) | -0.01 (0.07) | 0.27*** (0.07) | 0.10*** |
| Business performance | 0.29*** (0.07) | -0.09 (0.07) | 0.08 (0.07) | 0.06 (0.07) | -0.01 (0.07) | 0.20** (0.07) | 0.11*** |
| Overall performance | 0.24** (0.07) | -0.08 (0.07) | 0.05 (0.07) | 0.05 (0.07) | -0.04 (0.07) | 0.13# (0.07) | 0.06** |
| Survival | 0.08 (0.08) | -0.02 (0.08) | 0.09 (0.08) | -0.06 (0.08) | 0.18* (0.08) | -0.06 (0.08) | 0.01 |
| Duration | -0.11 (0.08) | -0.04 (0.08) | -0.14# (0.08) | -0.02 (0.08) | -0.03 (0.08) | 0.11 (0.08) | 0.01 |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

*** $p < 0.001$

TABLE 9-7
Control sharing, autonomy and JV performance
OLS standardized regression coefficients; Mutual assessments
(n = 59)

| Dependent Variables | Control sharing | | | Autonomy | | | R ² |
|----------------------|---------------------|-----------------------|-------------------|----------------------|------------------------|--------------------|----------------|
| | Operational Control | Technological Control | Strategic Control | Operational Autonomy | Technological Autonomy | Strategic Autonomy | |
| Satisfaction | 0.15 (0.13) | -0.09 (0.13) | 0.16 (0.13) | 0.18 (0.13) | 0.10 (0.13) | 0.21# (0.13) | 0.05 |
| Mutual satisfaction | 0.24* (0.12) | 0.00 (0.12) | 0.06 (0.12) | 0.17 (0.12) | 0.16 (0.12) | 0.39** (0.12) | 0.15* |
| Business performance | 0.29* (0.12) | 0.00 (0.12) | 0.11 (0.12) | 0.07 (0.12) | 0.20 (0.12) | 0.30* (0.12) | 0.12* |
| Overall performance | 0.20 (0.13) | -0.04 (0.13) | 0.01 (0.13) | 0.10 (0.13) | 0.09 (0.13) | 0.27* (0.13) | 0.03 |
| Survival | 0.12 (0.13) | -0.17 (0.13) | 0.08 (0.13) | -0.12 (0.13) | 0.20 (0.13) | -0.14 (0.13) | 0.04 |
| Duration | -0.04 (0.13) | -0.19 (0.13) | -0.21# (0.13) | 0.06 (0.13) | -0.19 (0.13) | 0.19 (0.13) | 0.05 |

Standard errors are in parentheses
$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

TABLE 9-8
Control sharing, autonomy and relationship dynamics
OLS standardized regression coefficients

| Dependent Variables | Control sharing | | | Autonomy | | | R ² |
|---|---------------------|-----------------------|-------------------|----------------------|------------------------|--------------------|----------------|
| | Operational Control | Technological Control | Strategic Control | Operational Autonomy | Technological Autonomy | Strategic Autonomy | |
| INDIVIDUAL ASSESSMENTS^a | | | | | | | |
| Trust/Commitment | 0.27** (0.09) | 0.12 (0.09) | 0.08 (0.09) | 0.08 (0.09) | 0.04 (0.09) | 0.03 (0.09) | 0.05# |
| Conflict | -0.24** (0.07) | 0.10 (0.07) | -0.08 (0.07) | -0.13 (0.07) | 0.09 (0.07) | -0.22** (0.07) | 0.11*** |
| MUTUAL ASSESSMENTS^b | | | | | | | |
| Trust/Commitment | 0.31* (0.13) | -0.10 (0.13) | 0.11 (0.13) | 0.13 (0.13) | 0.19 (0.13) | 0.07 (0.13) | 0.06 |
| Conflict | -0.23# (0.13) | 0.20 (0.13) | -0.13 (0.13) | -0.28* (0.13) | -0.18 (0.13) | -0.14 (0.13) | 0.13* |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 170$ ^b $n = 59$

exhibited a negative relationship with operational control and strategic autonomy for individual assessments, and with operational autonomy for mutual assessments. Nevertheless, significant relationships observed were most often weak, thereby suggesting again that neither control sharing nor autonomy were important factors for the dynamics of inter-partner relationships in JVs.

The case of recently-formed JVs

Finally, these relationships were examined in recently-formed JVs. As expected, the relationships were generally found to be stronger here (See Tables 9-9 and 9-10). Both regression and R^2 coefficients were of greater size. Particularly, the sharing of operational control, operational autonomy and strategic autonomy appeared to be especially effective in explaining business performance. Variance explained (R^2) reached 0.27 and 0.35 for individual and mutual assessments, respectively. The magnitude of this relationship suggested that these variables may be especially important for the performance of JVs.

Regarding relationship dynamics variables, the sharing of operational control was positively related with the presence of individual and mutual trust, while operational and strategic autonomy had a negative relationship with conflict (See Table 10-11). In turn, contrary to what was hypothesized in Hypothesis 7, the sharing of technological control was positively related with conflict. While control sharing at the operational level may reduce conflict, control sharing for

TABLE 9-9
Control sharing, autonomy and JV performance
OLS standardized regression coefficients; Individual assessments
JVs formed since 1980 (n = 108)

| Dependent Variables | Control sharing | | | Autonomy | | | R ² |
|----------------------|---------------------|-----------------------|-------------------|----------------------|------------------------|--------------------|----------------|
| | Operational Control | Technological Control | Strategic Control | Operational Autonomy | Technological Autonomy | Strategic Autonomy | |
| Satisfaction | 0.19* (0.09) | 0.02 (0.09) | 0.17# (0.09) | 0.17# (0.09) | -0.04 (0.09) | 0.18* (0.09) | 0.11** |
| Mutual satisfaction | 0.19* (0.09) | 0.02 (0.09) | 0.14 (0.09) | 0.18* (0.09) | -0.13 (0.09) | 0.23*** (0.09) | 0.14** |
| Business performance | 0.39*** (0.08) | -0.06 (0.08) | 0.06 (0.08) | 0.15# (0.08) | -0.10 (0.08) | 0.23** (0.08) | 0.27*** |
| Overall performance | 0.28** (0.07) | -0.08 (0.07) | 0.03 (0.07) | 0.11 (0.07) | -0.09 (0.07) | 0.16# (0.07) | 0.12** |
| Survival | 0.02 (0.09) | 0.06 (0.09) | 0.03 (0.09) | -0.01 (0.09) | 0.21* (0.09) | 0.04 (0.09) | 0.00 |
| Duration | -0.06 (0.10) | -0.09 (0.10) | 0.03 (0.10) | -0.14 (0.10) | -0.05 (0.10) | 0.02 (0.10) | 0.00 |

Standard errors are in parentheses.
p < 0.10 * p < 0.05 ** p < 0.01 *** p < 0.001

TABLE 9-10
Control sharing, autonomy and JV performance
OLS standardized regression coefficients; Mutual assessments
JVs formed since 1980 (n = 41)

| Dependent Variables | Control sharing | | | Autonomy | | | R ² |
|----------------------|---------------------|-----------------------|-------------------|----------------------|------------------------|--------------------|----------------|
| | Operational Control | Technological Control | Strategic Control | Operational Autonomy | Technological Autonomy | Strategic Autonomy | |
| Satisfaction | 0.20 (0.15) | -0.10 (0.15) | 0.18 (0.15) | 0.35* (0.15) | -0.10 (0.15) | 0.33* (0.15) | 0.18* |
| Mutual satisfaction | 0.25 (0.15) | -0.01 (0.15) | 0.08 (0.15) | 0.29# (0.15) | 0.02 (0.15) | 0.37* (0.15) | 0.15# |
| Business performance | 0.38** (0.13) | -0.05 (0.13) | 0.07 (0.13) | 0.38** (0.13) | 0.07 (0.13) | 0.39** (0.13) | 0.35** |
| Overall performance | 0.20 (0.13) | -0.03 (0.13) | -0.02 (0.13) | 0.31* (0.13) | -0.06 (0.13) | 0.37* (0.13) | 0.15# |
| Survival | 0.12 (0.16) | -0.07 (0.16) | 0.17 (0.16) | -0.12 (0.16) | 0.35* (0.16) | -0.01 (0.16) | 0.04 |
| Duration | -0.09 (0.17) | -0.18 (0.17) | -0.09 (0.17) | 0.06 (0.17) | 0.31# (0.17) | 0.06 (0.17) | 0.03 |

Standard errors are in parentheses
$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

TABLE 9-11
Control sharing, autonomy and relationship dynamics
OLS standardized regression coefficients
JVs formed since 1980

| Depende.it Variables | Control sharing | | | Autonomy | | | R ² |
|---|------------------------|--------------------------|----------------------|-------------------------|---------------------------|-----------------------|----------------|
| | Operational Control | Technological Control | Strategic Control | Operational Autonomy | Technological Autonomy | Strategic Autonomy | |
| INDIVIDUAL ASSESSMENTS^a | | | | | | | |
| Trust/Commitment | 0.29* (0.12) | -0.02 (0.12) | 0.10 (0.12) | 0.19 (0.12) | -0.04 (0.12) | 0.09 (0.12) | 0.07 |
| Conflict | -0.15 (0.09) | 0.06 (0.09) | -0.15 (0.09) | -0.11 (0.09) | -0.03 (0.09) | -0.30** (0.09) | 0.12** |
| MUTUAL ASSESSMENTS^b | | | | | | | |
| Trust/Commitment | 0.42* (0.15) | -0.22 (0.15) | 0.11 (0.15) | 0.24 (0.15) | 0.11 (0.15) | 0.16 (0.15) | 0.20* |
| Conflict | -0.19 (0.14) | 0.29* (0.14) | -0.17 (0.14) | -0.28* (0.14) | 0.00 (0.14) | -0.35* (0.14) | 0.25* |

Standard errors are in parentheses

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 108$ ^b $n = 41$

technology-related activities could have the contrary effect. Essentially, this result suggests that the exercise of control over different activities may have different impact on performance. It also support the use of split control structures for JVs.

Concluding remarks

In sum, JVs with shared operational control and with greater operational and strategic autonomy were found to exhibit better performance. In these JVs, parent firms expressed greater satisfaction and mutual trust. They were also involved in less frequent conflict. Essentially, these results were consistent with the study's research hypotheses that built from social exchange theory and transaction cost analysis.

Nevertheless, beyond these observations, results obtained for technological control sharing and autonomy underlined the particular importance of technological matters for the dynamics of JVs. JVs with extensive technological autonomy were found to have a greater likelihood of survival, and to some extent, greater longevity. However, these ventures did not exhibit greater performance. Thus, it appeared that JVs which distanced themselves from the parents' technological core and activities, and reduced their technology dependence, have been more likely to survive. Although no definitive conclusion can be drawn on this issue in this study, it is possible that these JVs were able to develop a distinct identity, to carve their own niche and therefore, to acquire

independence vis-a-vis parent firms, because of their earlier autonomy at the time of formation. In contrast, the fate of JVs with limited technological autonomy can be seen as more dependent on the parent firms' strategy and decisions. Being in a position where they could not develop a unique technological base, some JVs may become redundant or simply not provide parent firms with unique products, market accesses or competencies.

In addition, contrary to what was expected, shared technological control was associated with greater conflict. This relationship may reflect the importance parent firms attribute to the transfer as well as to the protection of technological knowledge and competencies in JVs. Since this result was not systematic in all analyses, it does not necessarily suggest that shared control is a basic factor of conflict. However, shared technological control may well become such a factor in the case of JVs where one parent firm's objective to learn about or to acquire a technology is opposed to its partner's desire to maintain control over, and protect its technological assets. In such ventures, these divergences are likely to lead to important conflict between parent firms. Since several sample JVs involved partners exchanging technology for marketing skills/market access, it was plausible that this result reflected such situations.

Furthermore, the above analyses combining control sharing and autonomy again showed that the division of control structure represents a more important factor of performance in recently-formed JVs than in older and more established

ventures. Yet, despite their greater importance in recently-formed JVs, control sharing and autonomy did not emerge as the critical determinants of performance and relationship dynamics that were expected. By the sheer magnitude of the relationships observed, it became manifest that factors other than control sharing and autonomy were more important in explaining the performance and the dynamics of inter-partner relationships in JVs. This situation is especially evident for variables such as satisfaction, survival and duration for which the explanatory power of control sharing and autonomy remained limited. In short, while the business performance of JVs may be associated with dimensions of control sharing and autonomy, further research on the factors leading to parent firms' satisfaction, JV survival and duration, as well as to the development of mutual trust and conflict appears warranted.

CHAPTER 10
CONTROL, AUTONOMY AND PERFORMANCE:
DOMESTIC VS. INTERNATIONAL JOINT VENTURES

While earlier analyses combined domestic and international JVs, in this chapter, these two types of JVs are compared and contrasted. The comparison permits the assessment of the nature and scope of differences and similarities between these two types of JVs. Furthermore, different analyses are conducted to examine whether control sharing and autonomy affect the performance and inter-partner relationship dynamics of international JVs (IJVs) differently compared to domestic ventures (DJVs).

1. A comparison of DJVs and IJVs

The study's Canada-based DJVs and IJVs were compared along general characteristics as well as patterns of control sharing, autonomy, relationship dynamics and performance. Essentially, this comparison revealed few significant differences (at the 0.05 level) between the two types of JVs (See Table 10-1). This was evident for general characteristics such as size, pattern of equity split, market focus and technological advance. Both DJVs and IJVs also exhibited similar satisfactory performance levels. In addition, IJVs were expected to exhibit

TABLE 10-1
A comparison of Canada-based IJVs and DJVs

| | IJVs versus DJVs |
|---------------------------------------|---|
| <u>General characteristics</u> | |
| Size | No differences. A majority of IJVs and DJVs with sales less than \$50 million. |
| Division of equity | No differences. 50/50 is most frequently used in both IJVs and DJVs. |
| Market focus | No differences. Most IJVs and DJVs have a domestic focus. |
| Technological advance | No differences. IJVs and DJVs are generally more technologically advanced than competitors. |
| <u>Control and autonomy</u> | |
| Operational control | No differences except for day-to-day management which is more shared in DJVs. |
| Technological control | More shared in DJVs |
| Strategic control | No differences except for financing which is more shared in DJVs. |
| Operational autonomy | No differences except for hiring/firing of managers for which IJVs have more autonomy. |
| Technological autonomy | Less autonomy in IJVs. |
| Strategic autonomy | No differences. Limited autonomy in both IJVs and DJVs |
| <u>Relationship dynamics</u> | |
| Trust | No differences. Relatively high levels of trust in IJVs and DJVs. |
| Conflict | Conflict generally more frequent in IJVs, especially regarding marketing of JV. |
| <u>Performance outcomes</u> | |
| Business performance | No differences. A majority of IJVs and DJVs performed at or above parent firms' initial expectations. |
| Satisfaction | No differences. Parent firms moderately satisfied with IJVs and DJVs. |

lower levels of trust/commitment and more frequent conflict, since national culture differences have been suggested to represent a source of conflict and a threat to the emergence of trust in IJVs. However, this contention received only minimal support. IJVs involved lower levels of mutual trust/commitment than DJVs but the difference was significant only at the 0.10 level. Conflict was also found to be relatively more frequent in IJVs, although differences were significant only in the case of conflict over marketing. To explain these limited differences, it may be important to note that at least 50% of IJVs involved Canadian and American parent firms. In these ventures, cultural differences may be considered smaller than if the foreign parent had Japanese or European origins.

The initial comparison of the importance given to different objectives by Canadian parents in DJVs and by all parents involved in IJVs suggested that these firms also have similar motives for forming JVs (See Table 10-2). The only exception was reducing capital investment which was significantly less important in IJVs. However, when comparing the objectives of foreign firms in IJVs with those of Canadian firms involved in DJVs, facilitating rapid market entry and exploiting their firm's technology were found to be more important objectives for foreign parents than for Canadian firms. Foreign firms also gave less importance to reducing capital investment in the formation of IJVs. Essentially, inadequate financial resources and the limited size of the domestic market were major motives for entering DJVs. In addition, most DJVs and IJVs entailed some diversification, either in terms of product or market. Yet, in contrast to IJVs, DJVs

included firms from the same industry which attempted to create ventures with a distinct identity and culture compared to their own organization or industry's culture. In turn, foreign firms perceived IJVs as a means to exploit their unique products and technologies in a new market while accessing existing distribution channels. In sum, the formation of DJVs and IJVs involved several different objectives, but also motives of similar importance in both types of JVs.

TABLE 10-2
Importance of various objectives in parent firms' decision
to establish DJVs and IJVs in Canada

| OBJECTIVES ^a | DJVs (N = 45) | IJVs | |
|--|------------------|-----------------------------|--------------------------------|
| | | ALL PARENTS (N = 104) | FOREIGN PARENTS (N = 55) |
| Spread risk by having partner | 3.1 | 3.5 | 2.8 |
| Reduce capital investment | 3.8 | 3.0* | 2.5** |
| Obtain access to marketing skills | 2.1 | 2.2 | 2.2 |
| Access distribution channels | 2.8 | 2.7 | 2.9 |
| Obtain partner's technology, patent, etc. | 2.8 | 3.1 | 2.5 |
| Facilitate rapid market entry | 2.6 | 2.6 | 4.5** |
| Promote development of new product | 2.7 | 2.8 | 2.9 |
| Obtain raw materials | 2.4 | 2.3 | 2.9 |
| Exploit your firm's technology | 2.4 | 2.6 | 3.9* |
| Reduce costs/risks of technology development | 2.7 | 2.9 | 3.2 |

* $p < 0.05$ ** $p < 0.01$

^a 1 = Not important 3 = Moderately important 5 = Very important

Comparison of patterns of control and autonomy also revealed similarities in the structure of IJVs and DJVs. For instance, patterns of operational and strategic control sharing, as well as of operational and strategic autonomy were relatively similar in both types of JVs. One exception was the control over day-to-day decisions which was significantly more shared in DJVs. In several IJVs, the

responsibility for day-to-day management was assumed by the local partner. This more dominant control was thought to reduce, for the foreign parent, the cost associated with managing operations at a distance or in a different country. It was also expected to speed up decision making for matter requiring daily attention. Furthermore, IJVs had significantly more autonomy than DJVs for the hiring/firing of JV managers.

It is the extent of control sharing and autonomy over technological activities and decisions which most distinguished IJVs and DJVs. In fact, control over product technology and patents and trademarks, as well as the overall technological control were found to be significantly less shared in IJVs compared to DJVs. IJVs were also found to enjoy significantly less technological autonomy than their domestic counterparts. Further investigation compared the control exercised by Canadian and foreign firms in IJVs, and specifically the proportion of IJVs with foreign dominant control, with shared control or with Canadian/local dominant control. This comparison showed that technological control was frequently under foreign dominant control (50% of all IJVs), while strategic control was commonly shared (in 65% of all IJVs). None of the these structures was more frequently used for operational control.

Thus, not only do foreign firms establish JVs to exploit their technological resources on the Canadian market, but they also tend to maintain dominant control over these resources and to allow their JVs limited technological

autonomy. The use of such control and autonomy structures reflects foreign parents' attempts to ensure protection of their technological assets. They are expected to reduce the risks of leakages and non-desired transfers of technology to the partner firm, or even to third parties.

In sum, this comparison of Canada-based DJVs and IJVs showed that these organizations shared several attributes. However, they were also found to involve some different objectives as well as distinct control sharing and autonomy structures. In fact, DJVs were thought to exhibit characteristics of "scale" JVs (Hennart, 1988; Kogut, 1988) where partners belong to the same industry and contribute similar resources. In turn, IJVs were considered to be "link" JVs where partners typically contribute complementary resources, such as technology and marketing skills. These differences suggested that IJVs exhibit distinct dynamics, and that the international nature of JVs could moderate the relationship linking the division of control with relationship dynamics, and JV performance. This moderating effect will be investigated in the following section.

2. Control sharing, relationship dynamics and performance: IJVs vs. DJVs

Informants appeared to attribute much greater importance to cultural differences in IJVs than our comparison of IJVs and DJVs indicated. Informants frequently referred to the nationality of their partner or parent firm to explain an array of attitudes, behaviors, and of course, problems. Inter-partner conflict or

disagreements were often attributed either to cultural differences or to the peculiarities of one parent firm's national culture. However, the above comparison of IJVs and DJVs did not support this importance of cultural differences in IJVs. Nevertheless, the key issue remains as follows: does control sharing have a different role and impact in IJVs compared to DJVs?

Based on discussions with informants, the answer to this question is positive. In fact, the exercise of shared control appears to have a peculiar importance in IJVs. Attempts by any of the parent firms, foreign or local, to exercise dominant control was often met with serious resistance by its partner. On one hand, local or Canadian parent firms were often opposed to their foreign partner exercising dominant control. Typically, they judged the foreign partner's knowledge of and experience in the Canadian environment too limited to enable it to manage the venture effectively. On the other hand, foreign parents seldom accepted to relinquish complete latitude to their local partner. Delegating some day-to-day issues to the local partner was thought to be economic and logical. However, foreign parents often insisted on maintaining some control in order to protect their investment and interests. The acquisition of knowledge about the Canadian market was also thought to be difficult to achieve if the local partner exercised overall dominant control. Furthermore, the effective adaptation of the foreign parent's product(s) to the needs and specifications of the Canadian market was described to require the involvement of both partner firms.

Furthermore, the co-existence of parent firms with different national cultures stressed the critical role control structure may play for inter-partner communication in IJVs. With cultural differences placing a stress on the relationship between parents, effective inter-partner communication and genuine gestures of commitment achieved even greater significance in IJVs. As raised earlier, the exercise of shared control was thought to promote effective communication and the development of mutual trust and commitment.

In DJVs, the issue of control generally took another dimension. Typically, DJVs involved firms from the same industry, or at least firms and managers which knew each other or had been involved in previous business relationships. In that context, the control exercised by each parent firm was perceived to have a different importance. In fact, shared control was often seen as the norm for DJVs. According to one informant, leaving dominant control to their partner would have been perceived as selling off their activities or withdrawing from the business. Sharing control also reflected the objective of pooling resources and undertaking cooperation. In turn, a parent firm's control was complemented by the presence of a collection of relationships surrounding the JV and its parent firms. As suggested in the literature (e.g., Buckley and Casson, 1988), these relationships represented strong mechanisms enforcing mutual forbearance and limiting opportunism, through reputation effect and by offering possibilities of retaliation. Therefore, in DJVs, the aspect of control linked to the protection of one's own interests was interpreted to be of less importance.

Hypothesis testing

The effect of the international nature of JVs was further assessed by testing Hypothesis_{M1}, proposing that this characteristic of a JV will moderate the relationships linking the sharing of control with JV performance and relationship dynamics. By extension, it was suggested that there will be differences between IJVs and DJVs in the strength and direction of these relationships.

As a first step in testing this hypothesis, regression analyses were conducted for IJVs and DJVs, respectively. These analyses showed that control sharing was a poor factor of performance and relationship dynamics in DJVs (See Tables 10-5 and 10-6). Yet, the sharing of technological control was a strong correlate of mutual satisfaction ($\beta = 0.86$; $p < 0.05$) and satisfaction ($\beta = 0.74$; $p < 0.05$). The sharing of strategic control was also related with mutual satisfaction ($\beta = 0.46$; $p < 0.05$). In contrast, in IJVs, the sharing of operational control exhibited significant relationships with most performance variables, including business performance and overall performance, for both mutual and individual assessments. In addition, the sharing of operational control was significantly related with individual assessments of mutual satisfaction, duration and trust/commitment as well as with individual and mutual assessments of conflict. Strategic control sharing also had significant relationships with individual and mutual assessments of satisfaction.

TABLE 10-3
Control sharing and JV performance in DJVs and IJVs
OLS standardized regression coefficients; Individual assessments

| Dependent Variables | Domestic joint ventures (DJVs) ^a | | | International joint ventures (IJVs) ^b | | | R ² |
|--------------------------------|---|-----------------------|-------------------|--|-----------------------|-------------------|----------------|
| | Operational Control | Technological Control | Strategic Control | Operational Control | Technological Control | Strategic Control | |
| <u>JV performance outcomes</u> | | | | | | | |
| Satisfaction | 0.09 (0.19) | 0.09 (0.19) | 0.28 (0.19) | 0.10 (0.09) | -0.13 (0.09) | 0.18* (0.09) | 0.04* |
| Mutual satisfaction | -0.02 (0.19) | 0.19 (0.19) | -0.02 (0.19) | 0.20* (0.09) | -0.02 (0.09) | 0.00 (0.09) | 0.03# |
| Business performance | -0.24 (0.19) | 0.10 (0.19) | -0.08 (0.19) | 0.22* (0.09) | -0.14 (0.09) | 0.06 (0.09) | 0.07** |
| Overall performance | -0.22 (0.19) | 0.20 (0.19) | -0.21 (0.19) | 0.31*** (0.09) | -0.11 (0.09) | 0.11 (0.09) | 0.12*** |
| Survival | 0.32 (0.19) | -0.28 (0.19) | 0.20 (0.19) | -0.04 (0.09) | 0.02 (0.09) | 0.01 (0.09) | 0.00 |
| Duration | 0.16 (0.19) | 0.07 (0.19) | -0.03 (0.19) | -0.25* (0.09) | -0.14 (0.09) | -0.15# (0.09) | 0.07** |
| <u>Relationship dynamics</u> | | | | | | | |
| Trust/Commitment | 0.21 (0.27) | 0.10 (0.19) | -0.08 (0.19) | 0.22* (0.09) | -0.12 (0.09) | 0.06 (0.09) | 0.07** |
| Conflict | -0.24 (0.19) | 0.10 (0.19) | -0.08 (0.19) | -0.24** (0.09) | -0.14 (0.09) | 0.06 (0.09) | 0.07** |

Standard errors are in parentheses

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 45$ ^b $n = 125$

TABLE 10-4
Control sharing and JV performance in DJVs and IJVs
OLS standardized regression coefficients; Mutual assessments

| Dependent Variables | Domestic joint ventures (DJVs) ^a | | | International joint ventures (IJVs) ^b | | | R ² |
|--------------------------------|---|-----------------------|-------------------|--|-----------------------|-------------------|----------------|
| | Operational Control | Technological Control | Strategic Control | Operational Control | Technological Control | Strategic Control | |
| <u>JV performance outcomes</u> | | | | | | | |
| Satisfaction | -0.18 (0.31) | 0.74* (0.33) | 0.33 (0.24) | 0.11 (0.13) | -0.15 (0.13) | 0.28* (0.13) | 0.07# |
| Mutual satisfaction | -0.36 (0.24) | 0.86* (0.31) | 0.46* (0.22) | 0.18 (0.14) | -0.05 (0.14) | 0.15 (0.14) | 0.01 |
| Business performance | -0.26 (0.35) | 0.47 (0.37) | 0.37 (0.26) | 0.32* (0.13) | -0.12 (0.13) | 0.07 (0.13) | 0.09* |
| Overall performance | -0.54 (0.35) | 0.67# (0.36) | 0.09 (0.26) | 0.29* (0.13) | -0.16 (0.13) | 0.12 (0.13) | 0.10* |
| Survival | 0.40 (0.33) | -0.25 (0.35) | 0.43 (0.25) | 0.04 (0.14) | 0.05 (0.14) | 0.07 (0.14) | 0.00 |
| Duration | -0.26 (0.42) | 0.26 (0.53) | -0.11 (0.37) | -0.20 (0.13) | 0.17 (0.13) | -0.23# (0.13) | 0.08# |
| <u>Relationship dynamics</u> | | | | | | | |
| Trust/Commitment | 0.22 (0.36) | 0.41 (0.46) | 0.01 (0.33) | 0.30# (0.16) | 0.08 (0.16) | 0.10 (0.16) | 0.03 |
| Conflict | -0.00 (0.40) | -0.41 (0.50) | -0.60 (0.36) | -0.33* (0.16) | 0.10 (0.16) | -0.12 (0.16) | 0.09* |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 17$ ^b $n = 44$

Although the small sample size warrants caution in the interpretation of results, analyses on recently-formed JVs confirmed the above observations regarding DJVs and IJVs as well as earlier conclusions on recently-formed JVs. In IJVs, relationships linking the sharing of operational control with business performance and overall performance, as well as with trust/commitment and conflict, were generally stronger. The sharing of operational control was an especially effective correlate of business performance ($\beta = 0.61$; $p < 0.001$; $R^2 = 0.32$, $p < 0.001$) and overall performance ($\beta = 0.46$; $p < 0.001$; $R^2 = 0.17$, $p < 0.05$). In turn, few results were significant for DJVs, a situation partly explained by a small sample size ($n = 11$). Nevertheless, positive correlations were observed between the sharing of technological control and parent firms' satisfaction. The sharing of strategic control was also positively related with survival and negatively with mutual assessments of conflict.

To evaluate the significance of these differences between IJVs and DJVs, moderated regression analyses were performed. Procedures outlined in Baron and Kenny (1986) and Cohen and Cohen (1983) were followed for individual and aggregated data. While complete results are presented in Appendix 2, significant differences between DJVs and IJVs were found in only a few cases. Significant interaction coefficients suggested that the relationship linking the sharing of operational control with business and overall performance was significantly stronger in IJVs compared to DJVs. The sharing of technological control was also a significantly more important factor of satisfaction, mutual satisfaction and

overall performance in DJVs compared to IJVs. None of the results was significant in the case of relationship dynamics variables, thereby suggesting that control sharing did not affect, in a different manner, the relationship dynamics of IJVs compared to DJVs. Yet, despite some significant regression coefficients, the moderating hypothesis received only weak support. Although these limited results may be explained by the small number of DJVs, the distinction between IJVs and DJVs appeared to be of significance only for overall performance.

Concluding remarks

An earlier discussion showed that IJVs and DJVs were different in some aspects but also shared several characteristics. Results obtained for control sharing from the above analyses reflected this situation. For many performance and relationship dynamics variables, the sharing of operational, technological and strategic control did not appear to have a different effect or importance in IJVs compared to DJVs. In turn, the international nature of a JV was found to matter in the case of overall performance. While a significant factor of overall performance in IJVs, the sharing of operational control had little or no importance for the performance of DJVs. Similarly, the sharing of technological control was a significant factor of overall performance and satisfaction in DJVs, while being of minimal importance in IJVs. Thus, the sharing of operational and technological control was found to affect the overall performance of IJVs differently compared to DJVs.

In conclusion, results suggested that the distinction between DJVs and IJVs should not be overlooked for the study of their formation and management. By extension, parent firms could be advised to adapt their management approach and their control to the domestic or international nature of their JV. Yet, in DJVs as in IJVs, control sharing did not achieve the prominence that was expected and suggested in the literature. In either type of JVs, control sharing appeared as a significant but relatively small factor of performance.

3. Autonomy, relationship dynamics and JV performance: IJVs vs. DJVs

The comparison of IJVs and DJVs revealed different patterns of autonomy in these ventures, particularly regarding technological activities. Despite these differences, informants provided evidence that the autonomy of IJVs and DJVs shared some fundamental characteristics. At least, the nature of autonomy appeared similar in many ways in these two types of JVs.

Consistent with previous observations, domestic and international JVs were described to enjoy typically greater autonomy than domestic and foreign wholly-owned subsidiaries, respectively. In addition, the relationship between JV autonomy and performance was described in a similar manner in both types of JVs. In IJVs and DJVs, performance involved achieving an effective balance between the need for autonomy of the JV and the required coordination with the parent firms. Rather than simply obtaining the maximum autonomy, achieving

this compromise, or the right balance between these forces represented a key management challenge for JVGMs.

Although the challenge seemed similar in both types of JVs, this task was described as more difficult to perform effectively in IJVs. The presence of parent firms with different national cultures, in addition to different organizational cultures, was thought to complicate the job of the JVGM. It also challenged his/her diplomatic abilities to an even greater extent. The most obvious consequences of such situations were observed in the decision making process of IJVs. National culture differences were described to add unique complexity to this process, particularly by making the development of compatible procedures and practices by parent firms more difficult. With parent firms of different national cultures, not surprisingly, procedures and criteria for the approval of projects tended to diverge, and sometimes to enter into conflict. As a result, decision making and project approvals by parent firms frequently required even more extensive negotiation and compromises in IJVs, compared to DJVs.

In sum, the international nature of a JV was thought to add to the inherent complexity of these organizations. The management of the relationship between the JV and the parents appeared as a more laborious task in IJVs. This characteristic was believed to have implications for the relationships linking the extent of autonomy with the performance and relationship dynamics of JVs. This issue will be examined more closely in the following section.

Hypothesis testing

As was the case for control sharing, the relationships between autonomy, performance and relationship dynamics were expected to be moderated by the international or domestic nature of a JV. Hypothesis_{M2} was tested using the same approach as for control sharing.

When comparing results of regression analysis in DJVs and IJVs, operational autonomy emerged as a key factor of satisfaction and trust/commitment in DJVs (See Tables 10-5 and 10-6). In fact, regression coefficients between operational autonomy and individual and mutual assessments of mutual satisfaction and trust/commitment were all positive and greater than 0.50. Strategic autonomy was significantly related with mutual assessments of mutual satisfaction and business performance. A positive relationship was also observed between technological autonomy and duration. In IJVs, operational autonomy did not exhibit significant relationships with any performance and relationship dynamics variables. Instead, in IJVs, strategic autonomy was positively related with individual assessments of mutual satisfaction, duration as well as mutual assessments of overall performance. It was also negatively related with conflict, as technological autonomy was with survival. In recently-formed DJVs, results confirmed the importance of operational autonomy for mutual satisfaction and the climate of trust/commitment. A DJV's duration was also found to correlate positively with its technological autonomy. In turn, the business and overall

performance of IJVs were positively related with strategic autonomy, but negatively with technological autonomy.

Differences observed between DJVs and IJVs were further examined in moderated regression analyses (See Appendix 2). The presence of significant interaction terms confirmed the greater importance of operational autonomy for mutual satisfaction, and of technological autonomy for duration, in DJVs. In IJVs, the significance of the negative relationship linking technological autonomy with business and overall performance was also supported. As for control sharing, no significant differences were found between DJVs and IJVs for relationship dynamics variables.

Concluding remarks

As was the case for control sharing, some dimensions of autonomy were found to achieve different roles and importance depending on the type of JV. For instance, technological autonomy was negatively related with performance in IJVs, but positively related in DJVs. In turn, strategic autonomy was a significant factor of performance in both types of JVs.

Nevertheless, results were consistent with the contention that a critical management challenge for IJV general managers was to achieve a balance between the autonomy of the venture and the coordination with the parent firms.

TABLE 10-5
Autonomy and JV performance in DJVs and IJVs
OLS standardized regression coefficients; Individual assessments

| Dependent Variables | Domestic joint ventures (DJVs) ^a | | | International joint ventures (IJVs) ^b | | | R ² |
|--------------------------------|---|------------------------|--------------------|--|------------------------|--------------------|----------------|
| | Operational Autonomy | Technological Autonomy | Strategic Autonomy | Operational Autonomy | Technological Autonomy | Strategic Autonomy | |
| <u>JV performance outcomes</u> | | | | | | | |
| Satisfaction | 0.30# (0.17) | 0.11 (0.17) | 0.15 (0.17) | 0.07 (0.09) | -0.04 (0.09) | 0.17# (0.09) | 0.01 |
| Mutual satisfaction | 0.54** (0.15) | -0.02 (0.15) | 0.21# (0.15) | 0.01 (0.09) | -0.11 (0.09) | 0.28** (0.09) | 0.07** |
| Business performance | 0.14 (0.17) | 0.19 (0.17) | 0.26# (0.17) | 0.01 (0.09) | -0.13 (0.09) | 0.17 (0.09) | 0.02 |
| Overall performance | 0.07 (0.18) | 0.15 (0.18) | 0.05 (0.18) | 0.01 (0.09) | -0.16# (0.09) | 0.15# (0.09) | 0.03# |
| Survival | -0.08 (0.18) | -0.09 (0.18) | -0.08 (0.18) | 0.01 (0.09) | -0.18* (0.09) | -0.08 (0.09) | 0.02 |
| Duration | -0.32# (0.17) | 0.48* (0.17) | -0.16 (0.17) | -0.04 (0.09) | -0.07 (0.09) | 0.22* (0.09) | 0.04# |
| <u>Relationship dynamics</u> | | | | | | | |
| Trust/Commitment | 0.53* (0.22) | -0.09 (0.22) | -0.18 (0.22) | -0.05 (0.11) | -0.05 (0.11) | 0.08 (0.11) | 0.00 |
| Conflict | -0.21 (0.17) | 0.03 (0.17) | -0.25# (0.17) | -0.13 (0.09) | -0.02 (0.09) | -0.19* (0.09) | 0.03# |

Standard errors are in parentheses

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 45$ ^b $n = 125$

TABLE 10-6
Autonomy and JV performance in DJVs and IJVs
OLS standardized regression coefficients; Mutual assessments

| Dependent Variables | Domestic joint ventures (DJVs) ^a | | | International joint ventures (IJVs) ^b | | | R ² |
|--------------------------------|---|------------------------|--------------------|--|------------------------|--------------------|----------------|
| | Operational Autonomy | Technological Autonomy | Strategic Autonomy | Operational Autonomy | Technological Autonomy | Strategic Autonomy | |
| <u>JV performance outcomes</u> | | | | | | | |
| Satisfaction | 0.77* (0.35) | -0.25 (0.35) | 0.18 (0.23) | 0.05 (0.15) | 0.02 (0.15) | 0.27# (0.15) | 0.01 |
| Mutual satisfaction | 0.98*** (0.22) | -0.29 (0.22) | 0.45** (0.15) | -0.04 (0.15) | -0.04 (0.15) | 0.37* (0.15) | 0.08 |
| Business performance | 0.44 (0.33) | 0.03 (0.33) | 0.53* (0.22) | -0.01 (0.15) | 0.09 (0.15) | 0.25# (0.15) | 0.01 |
| Overall performance | 0.32 (0.40) | 0.01 (0.40) | 0.24 (0.32) | 0.02 (0.15) | -0.02 (0.15) | 0.30* (0.15) | 0.03 |
| Survival | -0.41 (0.42) | 0.23 (0.42) | -0.22 (0.27) | -0.03 (0.15) | 0.23 (0.15) | -0.11 (0.15) | 0.01 |
| Duration | 0.36 (0.43) | -0.33 (0.43) | 0.02 (0.28) | 0.03 (0.15) | 0.17 (0.15) | -0.34# (0.15) | 0.08# |
| <u>Relationship dynamics</u> | | | | | | | |
| Trust/Commitment | 0.63** (0.25) | -0.43 (0.25) | 0.03 (0.16) | -0.02 (0.16) | 0.05 (0.16) | 0.13 (0.16) | 0.00 |
| Conflict | -0.12 (0.40) | -0.32 (0.50) | -0.28 (0.36) | -0.29 (0.16) | -0.15 (0.16) | -0.12 (0.16) | 0.05 |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 17$ ^b $n = 44$

The performance of an IJV appeared to be associated with its ability to achieve some strategic autonomy, while maintaining a continuous technological relationship with parent firms. Since these ventures typically involve the exploitation of a foreign technology in the Canadian market, their success may rely on the technological support provided by parent firms. This coordination may also insure effective adaptation and marketing of the technology and its related product in the domestic market.

In contrast, the performance of DJVs seemed to be a stricter matter of achieving significant operational, technological and strategic autonomy. Since these ventures did not pursue particular technological objectives, they may not require the same continuous relationship with parent firms as IJVs to achieve satisfactory results. Furthermore, DJVs were typically formed in businesses related but adjacent to the parents' activities. Thus, extensive autonomy at the operational and strategic levels may enable DJVs to respond more effectively to their distinct competitive and market environment, and to undertake required strategic initiatives. It may enable them to develop their own identity and culture. This would also explain why DJVs remained in operation longer if they were more autonomous at the technological level.

In sum, there was evidence that certain dimensions of autonomy affected IJVs differently compared to DJVs. Results also supported the necessity of accounting for the respective distinct characters of IJVs and DJVs in the study

as well as in the management of these organizations. Yet, in these results, autonomy appeared to be only a factor of modest importance for the performance and relationship dynamics of both IJVs and DJVs.

4. Control sharing and autonomy: IJVs vs. DJVs

The final step in our comparison of IJVs and DJVs involved analyses combining dimensions of control sharing and autonomy. Essentially, these analyses confirmed earlier conclusions.

For instance, the sharing of operational and strategic control was again a more important factor of overall performance and satisfaction in IJVs compared to DJVs. Analyses also showed that technological autonomy was a positive factor of overall performance in DJVs, but a negative one in IJVs. They corroborated the positive relationship linking strategic autonomy with satisfaction and business performance in both IJVs and DJVs. Finally, these analyses confirmed that control sharing and autonomy were of greater importance for the performance of recently-formed IJVs and DJVs, compared to older ones. This situation was evident in recently-formed IJVs for which control sharing and autonomy were especially effective factors of business performance ($R^2 = 0.36$, $p < 0.001$) and overall performance ($R^2 = 0.25$, $p < 0.001$). However, such results were more the exception than the norm. Generally, relationships were weak and variance explained remained small, seldom exceeding 0.15.

In sum, these different analyses suggested that some dimensions of control sharing and autonomy affected the performance of IJVs differently compared to DJVs. Table 10-7 presents a summary of the findings in this regard. In contrast, results for the relationships linking control sharing and autonomy structures with relationship dynamics variables did not show any differences between IJVs and DJVs. Essentially, it appeared that the sharing of operational control was positively associated with the presence of trust/commitment in both types of JVs. Strategic and operational autonomy were also negatively related with conflict.

TABLE 10-7
Control sharing, autonomy and JV performance:
A summary of relationships in DJVs and IJVs

| Dependent variables | DJVs | IJVs |
|----------------------|--|--|
| Satisfaction | Strategic control sharing (-) Strategic autonomy (+) Technological control sharing (+) | Strategic control sharing (+) Strategic autonomy (+) |
| Mutual satisfaction | Technological control sharing (+) Operational autonomy (+) | - |
| Business performance | Strategic autonomy (+) | Technological autonomy (-) Strategic autonomy (+) |
| Overall performance | Technological control sharing (+) Technological autonomy (+) | Operational control sharing (+) Strategic control sharing (+) Technological autonomy (-) |
| Survival | - | - |
| Duration | Technological autonomy (+) | - |

Note: (+) Positive relationship
 (-) Negative relationship

Within this perspective, the study's moderating hypotheses were believed to have received mixed support. Even though there was some evidence of dimensions of control sharing and autonomy affecting IJVs and DJVs differently, the number and sizes of these differences remained limited. Furthermore, despite accounting for the domestic vs. international nature of JVs, the dimensions of control sharing and autonomy seldom proved to be the important factors of performance and relationship dynamics suggested in the JV literature. Globally, the explanatory power of these variables, although sometimes statistically significant, was limited in both DJVs and IJVs. Thus, the results suggested that factors other than control sharing and autonomy may be more effective in explaining the performance and the inter-partner relationship dynamics of DJVs and IJVs. Further investigation on the nature and importance of these factors is without a doubt warranted.

CHAPTER 11

CONCLUSIONS, CONTRIBUTIONS AND LIMITATIONS OF THE STUDY

This chapter is divided into five sections: a summary of the conclusions, the contributions of the study, its implications for the management of JVs, its limitations, and directions for future research.

1. Conclusions of the study

This study attempted to increase understanding of (1) the division of control in terms of both control sharing and autonomy, and (2) its relationship with the performance of JVs. Specifically, building from the stream of research on the division of control-JV performance relationship (e.g., Killing, 1982, 1983; Schaan, 1983; Beamish, 1984), the study addressed the following questions:

1. How is control divided in JVs?
2. How does the division of control affect the performance and inter-partner relationship dynamics of JVs?
3. Does the division of control affect international JVs and domestic JVs differently?

Patterns of division of control

This study found that the division of control, and specifically control sharing and autonomy structures could be examined according to three dimensions or groups of activities: operational, technological, and strategic. Operational control and operational autonomy involved activities related to the operations of JVs, such as management of human resources, marketing and manufacturing. Technological control and technological autonomy encompassed different technology-related activities and decisions, such as the process and product technology, patents, and R&D activities. Strategic control and strategic autonomy involved strategic-level decisions, such as capital expenditures, financing, and the location of the JV.

Using these three dimensions, patterns of control and autonomy were found to vary across activities and decisions. For instance, control over strategic activities and decisions was shared in a large majority of JVs. This shared control was thought to reflect the shared decision making nature of JVs as well as the existence of veto rights in JV agreements. In contrast, technological control was more often the site of dominant control, while control over operational decisions was more diversified. The study also found evidence of a relationship between the division of equity and the division of control in JVs. Control over operational, technological, and strategic areas was found to be generally more shared in 50/50 JVs than in majority/minority holdings ventures.

Furthermore, in the latter ventures, the extent of operational, technological and strategic control a parent exercised was directly related to its share of the JV's equity. However, such a relationship was not observed in 50/50 JVs, thereby suggesting that parent firms rely on a variety of mechanisms besides ownership to exercise control.

Regarding autonomy, JVs appeared to enjoy extensive operational autonomy, but significantly less strategic autonomy, since strategic decisions appeared to be mostly made by parent firm managers. Technological autonomy was greater than strategic autonomy and less than operational autonomy, as technological decisions were generally made equally by parent and JV managers. In contrast to patterns of control sharing which appeared to remain stable, JVs were found to gain autonomy with time. This trend was not found to be associated with the performance of the ventures.

The comparison of DJVs and IJVs revealed some significant differences in the patterns of control sharing and autonomy. For instance, day-to-day management was typically more shared in DJVs. In contrast, in IJVs, the local partner frequently assumed dominant control over this responsibility. The dominant control by the local partner was thought to reduce the cost associated with the exercise of control for the foreign parent and to speed up decision making for matters requiring daily attention. IJVs also enjoyed more autonomy in decisions related to the hiring and firing of JV managers, compared to DJVs.

TABLE 11-1
Control sharing, autonomy and JV performance
Summary of significant relationships

| Dependent Variables | Ali JVs | DJVs | IJVs |
|---|---|--|--|
| Satisfaction | Operational control sharing (+) Operat. autonomy (+) Strategic autonomy (+) | Technological control sharing (+) Strategic control sharing (+) Strategic autonomy (+) | Strategic control sharing (+) Strategic autonomy (+) |
| Mutual satisfaction | Operational control sharing (+) Operat. autonomy (+) Strategic autonomy (+) | Technological control sharing (+) Operat. autonomy (+) | - |
| Business performance | Operational control sharing (+) Strategic autonomy (+) | Strategic autonomy (+) | Techno. autonomy (+) Strategic autonomy (+) |
| Overall Performance | Operational control sharing (+) Strategic autonomy (+) | Technological control sharing (+) Techno. autonomy (+) | Operational control sharing (+) Strategic control sharing (+) Techno. autonomy (-) |
| Survival | - | - | - |
| Duration | - | Techno. autonomy (+) | - |
| <p>Note. (+) Positive relationship (-) Negative relationship</p> | | | |

in explaining the performance of these organizations than the management structure in place at the time of their formation.

Further analyses suggested that some dimensions of control sharing and autonomy affected the performance of DJVs differently compared to IJVs. The management structure of technological activities, particularly in terms of

In addition, technological control was found to be more shared in DJVs than in IJVs, where foreign partners tended to maintain dominant control over these activities and decisions. IJVs also exhibited less technological autonomy than DJVs. These patterns of control sharing and autonomy observed for technology-related decisions and activities were interpreted to be consistent with foreign parent firms' motivations for forming IJVs in Canada. This dominant control and limited autonomy would ensure protection of the foreign partner's technological resources against leakages and undesired transfers.

Division of control and JV performance

The study examined the relationship between the performance of JVs and the three dimensions of control sharing and autonomy identified earlier. These analyses revealed that not all dimensions of control sharing and autonomy were similarly or significantly related with the performance of JVs (See Table 11-1). For example, for all JVs, the sharing of operational control and strategic autonomy were the only dimensions found to be systematically related with perceptual measures of JV performance. Complementary analyses also showed that these relationships were generally stronger in recently-formed JVs compared to older ventures. In fact, the control sharing and autonomy structure, or how parent firms divided decision making responsibilities at the time of formation, was found to be a more important determinant of performance in recently-formed JVs. In older, more established JVs, a variety of factors could be more effective

TABLE 11-1
Control sharing, autonomy and JV performance
Summary of significant relationships

| Dependent Variables | Ali JVs | DJVs | IJVs |
|---|---|--|--|
| Satisfaction | Operational control sharing (+) Operat. autonomy (+) Strategic autonomy (+) | Technological control sharing (+) Strategic control sharing (+) Strategic autonomy (+) | Strategic control sharing (+) Strategic autonomy (+) |
| Mutual satisfaction | Operational control sharing (+) Operat. autonomy (+) Strategic autonomy (+) | Technological control sharing (+) Operat. autonomy (+) | - |
| Business performance | Operational control sharing (+) Strategic autonomy (+) | Strategic autonomy (+) | Techno. autonomy (+) Strategic autonomy (+) |
| Overall Performance | Operational control sharing (+) Strategic autonomy (+) | Technological control sharing (+) Techno. autonomy (+) | Operational control sharing (+) Strategic control sharing (+) Techno. autonomy (-) |
| Survival | - | - | - |
| Duration | - | Techno. autonomy (+) | - |
| <p>Note: (+) Positive relationship (-) Negative relationship</p> | | | |

in explaining the performance of these organizations than the management structure in place at the time of their formation.

Further analyses suggested that some dimensions of control sharing and autonomy affected the performance of DJVs differently compared to IJVs. The management structure of technological activities, particularly in terms of

autonomy, was thought to exemplify the differences between DJVs and IJVs. Indeed, the performance of IJVs was associated with limited technological autonomy, or in other words with their ability to maintain an effective coordination at the technological level with parent firms. In contrast, DJVs exhibited higher performance and remained in operation longer if they had extensive autonomy and distanced themselves technologically from parent firms.

Again these results were believed to reflect the differences observed in the Canadian and foreign firms' motivations to form DJVs and IJVs. Consistent with the importance of technological motives for their formation, IJVs' success may rely on the technological support provided by parent firms. In addition, the effective adaptation and marketing of the technology and its related products for the Canadian market is likely to require coordination between the local and foreign partners. This coordination would enable IJVs to benefit from the local partner's knowledge of the Canadian market and from the foreign parent's technological expertise. It would also explain why IJVs with shared operational and strategic control exhibited better performance.

In contrast, the performance of DJVs seemed to be a stricter matter of achieving autonomy at the operational, technological and strategic levels. Formed mainly for risk-sharing and investment-reduction motives, DJVs may not require the same relationship with parent firms as IJVs. Moreover, DJVs typically operated in businesses related but different from the parents' activities. Thus,

extensive autonomy may enable DJVs to respond more effectively to their distinct competitive environment, and to undertake required strategic initiatives. It may also assist them in developing their own identity and culture.

In sum, this study supported the existence of a relationship between the division of control and the performance of JVs. However, it provided only mixed empirical support to the hypotheses proposing positive relationships between control sharing and autonomy in JVs and the performance of these organizations. In fact, these relationships have appeared to be more complex than first expected. Results suggested that the strength and direction of these relationships were contingent on the dimensions of control sharing and autonomy, on the age of the JVs, as well as on the domestic versus international nature of the JVs. Nevertheless, results also showed that, overall, control sharing and autonomy structures were most effective in explaining the business and overall performance of JVs. In turn, they were of very limited importance for the survival and duration of JVs.

Division of control and relationship dynamics

The study also devoted attention to the relationship linking control sharing and autonomy with the dynamics of inter-partner relationships, and in particular with the presence of trust/commitment and conflict in JVs. Although control sharing and autonomy did not affect the relationship dynamics of IJVs differently

compared to DJVs, results mirrored those obtained for performance.

As for performance, not all dimensions of control sharing and autonomy were significantly or similarly related with the presence of trust/commitment and conflict. Parent firms were found to trust their partner more and to perceive less conflict when JVs had extensive strategic autonomy and their operational control was shared. JVs with extensive control sharing as well as strategic and operational autonomy were also characterized by greater mutual trust, and less frequent conflict. Yet, in recently-formed JVs, the sharing of technological control was found to be positively related with conflict. This finding contradicted the study's hypothesis regarding the relationship between control sharing and conflict. It was interpreted to reflect the reluctance of technology contributing firms to share their technological resources and assets. Attempts by their partner to access these resources, or to achieve some learning, may result in conflict.

In sum, the hypotheses proposing that control sharing and autonomy would be positively related with trust/commitment and negatively related with conflict received mixed support. The sheer magnitude of the relationships also suggested that control sharing and autonomy structures were very modest factors of trust, commitment and conflict in JVs. Interviews suggested that further investigation of inter-partner communication could provide further insight on the dynamics of inter-partner relationships.

Relationship dynamics and JV performance

The study confirmed the strong relationships linking trust/commitment and conflict with the performance of JVs. For instance, a parent's satisfaction and assessment of the JV's performance were negatively associated with its assessment of conflict, but positively related with its level of trust/commitment. In addition, JVs characterized by strong mutual trust/commitment and limited conflict exhibited higher business performance and parent firm satisfaction. Essentially, the magnitude of the relationships among trust/commitment, conflict, and JV performance suggested that it would be difficult for a JV to be perceived as successful in the absence of trust and in the presence of frequent conflict. Yet, as was the case for control sharing and autonomy structures, relationship dynamics variables did not prove to be important factors of a JV's duration and survival. These results raised serious questions about which factors underlie the parent firms' decision to terminate a JV or to keep it in operation.

Objective and perceptual measures of performance

The study also found evidence of significant relationships between objective and perceptual measures of performance. Specifically, recently-formed JVs exhibiting greater business performance, overall performance, and parent firm satisfaction, were found to be more likely to survive and to remain in operation longer. Essentially, these results suggested that the continued

existence of recently-formed JVs was more a matter of performance than of management structure or relationship dynamics. In fact, with the limited importance of control sharing, autonomy, trust/commitment and conflict, the survival and duration of a recently-formed JV appeared to be linked primarily to its initial performance and its ability to satisfy parent firms' early expectations.

Concluding remarks

In its examination of the division of control in JVs, this study identified different patterns and structures of control sharing and autonomy. It supported the existence of a relationship linking control sharing and autonomy with the performance and relationship dynamics of JVs. The study showed that not all dimensions of control sharing and autonomy had similar or significant relationships with the performance and relationship dynamics of JVs. In some cases, these relationships were also found to be affected by the age and international nature of JVs. The distinctive relationships associated with different dimensions of control, and the differences observed between recently-formed and older JVs, as well as between DJVs and IJVs may serve to explain, at least partially, the limited and conflicting evidence characterizing prior research.

However, despite some significant results, control sharing and autonomy did not prove to be the important factors of performance and relationship dynamics suggested by the literature and hypothesized in this study. Essentially,

the explanatory power of these variables remained limited in recently-formed and older JVs, in DJVs as well as in IJVs. This was especially evident for relationship dynamics variables as well as for the duration and survival of JVs.

Several explanations may be advanced for these limited results. For instance, variables other than control sharing and autonomy may be more effective in explaining the performance and relationship dynamics of JVs. Such variables may include the partner selection process, or characteristics of partners such as their respective JV experience, their resource and competence profile, as well as their resource contributions to the JVs. Macroeconomic conditions of the JVs' industry could also have been considered.

Furthermore, how parent control is structured in terms of control sharing and autonomy may not be the sole factor influencing JV performance. How control is exercised may also be of importance. Consistent with Schaan (1985), JV performance could be seen as the result of both the division of control and the mechanisms used by parent firms to exercise control. The use of control mechanisms that minimize governance costs, whether in combination with specific control structures or not, could be hypothesized to result in better JV performance. In addition, the effectiveness of control sharing and autonomy structures may be contingent on the role of JVs within parent firm strategy. Findings showed that some control sharing and autonomy structures had different effects in DJVs, which focus on risk- and investment-avoidance,

compared to IJVs, which involve technological motivations. Therefore, future research could investigate whether certain control structures might be more effective for specific parent firms' strategy.

2. Contributions of the study

This study's contributions to JV theory and research must be interpreted within the deductive and theory-testing approach which the study endorsed. The contributions pertain principally to our understanding of the relationship between the division of control and JV performance, and particularly to the impact of the age and of the international versus domestic nature of JVs on the strength and direction of this relationship. Other contributions are related to the distinctive importance of different dimensions of control and autonomy, to the development of an integrative framework building from transaction cost analysis and social exchange theory, as well as to the use of a multi-source approach.

The division of control-JV performance relationship

While providing empirical support to the existence of the relationship linking the division of control with JV performance, the study also suggested that this relationship was contingent on the JV's age. In particular, the control sharing and autonomy structure of JVs, or how the parent firm organized their management at the time of formation, was a more important determinant of

performance in recently-formed ventures than in older, more established ones. In short, the study showed that in the division of control-performance relationship, the age of a JV matters.

In addition, the study suggested that dimensions of control sharing and autonomy had different relationships with performance in DJVs compared to IJVs. Specifically, the study empirically supported the moderating effect of the international nature of a JV. Examination of this moderating effect also permitted the identification of differences and similarities between DJVs and IJVs, particularly in the motivations underlying their formation. In short, the study showed that the international versus domestic nature of a JV mattered in the division of control-performance relationship. By extension, it supported the necessity for distinguishing between these two types of JVs in the study and management of these organizations.

The dimensions of control sharing and autonomy

With the identification of dimensions of control sharing and autonomy, the study confirmed that the division of control was not a monolithic concept, and that different patterns of control sharing and autonomy were used over different activities of a JV. The identification of these dimensions represents an empirically-grounded basis for examining control structures in JVs, and especially the different types of split control JVs.

In addition, the identification of these dimensions enabled the study to show that the performance of JVs was associated not with an overall pattern of control and autonomy, but with specific patterns used over specific activities and decisions. Essentially, the relationships linking control sharing autonomy and JV performance appeared to be contingent on the fit between control sharing and autonomy structures and the types of activities and decisions over which these structures were used. This perspective builds on Schaan (1983), who suggested that JV success was the result of a fit between a parent firm's criteria of success, the activities it controlled, and the control mechanisms it used.

Finally, this study explored the relationship linking control sharing and autonomy with inter-partner relationship dynamics constructs such as trust, commitment and conflict. To our knowledge, this relationship had never been empirically investigated.

Transaction costs and social exchange theory

The study proposed a theoretical framework which integrated elements from transaction cost analysis (TCA) and social exchange theory (SET). This integration of elements of TCA and SET aimed at responding to the theoretical fragmentation of prior research. Scholars in the field of JV have adopted a variety of approaches based on, among other theories, TCA, resource dependence, strategic behavior, and game theory. This diversity is also

noticeable in the JV control literature, where prior research has relied on the strategy-structure approach, the resource dependence-bargaining power theory, and TCA. As noted by Parkhe (1993), this diversity adds to the already extensive fragmentation of JV research. In addition, scholars in the field of JV have examined many different dimensions of JVs, including motives of formation, partner selection, and division of control. Yet, empirical results have remained isolated and non-cumulative. This situation may explain the lack of cohesiveness of JV theory. It may have also deprived JV theory of the full benefits possible from the cross-fertilization and integration among different theoretical perspectives, and thus impeded the development of an integrative theory of JVs.

Furthermore, the mixed empirical support received in this study by propositions and hypotheses based on SET further illustrate the limitations associated with the use of a single theoretical framework. In fact, firms enter JVs for a variety of motives and objectives and a single theory may be unable to account effectively for this variety. Therefore, further advancements in the field of JVs are linked among others to the development of frameworks integrating different theoretical perspectives. Such frameworks will match and account for the complexity and variety of the motivations underlying the formation of JVs.

Multi-source approach

This study represented one of the few attempts to pursue a multi-source

approach in the investigation of JVs, and of the division of control in these organizations. The use of multiple sources builds on dyadic approaches to the study of inter-organizational relationships (Anderson and Narus, 1990; Smith, 1992) and avoids reliance on a single parent's perspective. Furthermore, while some studies had previously examined aggregated constructs, such as mutual satisfaction, this study investigated relationship dynamics constructs such as mutual trust and mutual assessments of conflict, as well as mutual assessments of business performance, which had never been examined.

This multiple source approach also enabled the study to make some methodological contributions. For instance, both individual and aggregated data were used in analyses, a feature seldom observed in prior research. The study also provided empirical evidence of perceptual convergence among sources, that is, among parent firms and JVGMs. This evidence extended Geringer and Hébert's (1991) conclusions on perceptual convergence to variables such as the division of control and the frequency of conflict.

3. Implications for the management of JVs

The study's findings have practical implications for the management of JVs. They may assist managers currently involved or contemplating involvement in JVs, to manage these organizations more effectively.

The dynamics of IJVs and DJVs

Examination of DJVs and IJVs revealed that these ventures shared several attributes, such as size, export orientation, survival rate, division of equity and technological advancement (See Table 11-2). These JVs also exhibited similarly satisfactory performance levels. Despite these similarities, IJVs and DJVs were found to have distinct motives of formation and different control sharing and autonomy structures. Essentially, IJVs appeared to be formed to enable foreign firms to speed up their entry and to exploit their unique technology in the Canadian market. In contrast, firms formed DJVs in order to reduce capital investments and to share risk with a partner. Foreign firms were also found to allow IJVs limited technological autonomy and to maintain dominant control over technological activities. In turn, responsibility for day-to-day management of DJVs was most often left to the local partner.

In conclusion, it is suggested that firms involved or contemplating involvement in JVs account for some specific characteristics of IJVs and DJVs. Overlooking differences in the motives underlying their formation and in the expectations in terms of control sharing and autonomy of foreign partners compared to domestic ones may prove to be harmful for the performance and success of JVs as well as for the relationship between the partners.

TABLE 11-2
Key characteristics of IJVs and DJVs

| IJVs versus DJVs | |
|------------------------|--|
| Motives of formation | <p>IJVs: Achieve rapid market entry Exploit foreign firm's technology</p> <p>DJVs: Reduce capital investment Share risk with partner</p> |
| Size | A majority of IJVs and DJVs with sales less than \$50 million. |
| Division of equity | 50/50 most frequently used in both IJVs and DJVs. |
| Market focus | Most IJVs and DJVs have a domestic focus. |
| Technological advance | IJVs and DJVs are generally more technologically advanced than competitors. |
| Operational control | Day-to-day management more shared in DJVs; under local dominant control in IJVs. |
| Technological control | More shared in DJVs; under foreign dominant control in IJVs. |
| Strategic control | Control over financing is more shared in DJVs. |
| Operational autonomy | More autonomy for hiring/firing of managers in IJVs |
| Technological autonomy | Less autonomy in IJVs. |
| Strategic autonomy | Limited autonomy in both IJVs and DJVs |
| Trust | Relatively high levels of trust in IJVs and DJVs |
| Conflict | Conflict generally more frequent in IJVs, especially regarding marketing of JV. |
| Performance | A majority of IJVs and DJVs performed at or above parent firms' initial expectations. Parent firms moderately satisfied with IJVs and DJVs. |

Trust and conflict in JVs

This study's findings emphasized the importance for managers to invest the time and effort required to support the development of mutual trust and to

avoid frequent conflict. Indeed, JVs characterized by extensive mutual trust and limited conflict between the partners tended to show better performance. Parent firms were also more satisfied with their venture and its performance.

However, while stressing the importance of developing good relationships with the partner firms and an atmosphere of cooperation and mutual trust in the JV, the JV literature is rather vague on what managers can do to support the emergence of mutual trust. In this context, this study suggested some trust-building mechanisms which may be applicable to both domestic and international JVs. In particular, the exercise of shared control over the operation of JVs, as well as providing extensive strategic and operational autonomy to the ventures, may be one of the key strategies firms may use to support the development of mutual trust and to limit conflict. In turn, the exercise of shared technological control may result in serious conflict as the technology contributing firm is likely to insist on maintaining dominant control. Therefore, partners may want to consider leaving dominant control over the JV's technological activities to the technology contributing firm.

Furthermore, several behaviors and actions by partner firms, associated with the exercise of shared operational control, were suggested to have positive effects on the level of trust in JVs. For instance, the willingness to make decisions openly and jointly, to seek input from the partner, to share information, and to ensure that the partner felt an involvement in decision making represent

some of the actions and behaviors which could support the development of mutual trust. The involvement of key senior officers and top-quality individuals of the parent firms in the management of the venture, as either permanent or ad hoc members of the JV's board of directors is likely to have a similar effect. Essentially, it appeared that in all JVs, whether shared control or not, extensive communication and information exchanges between partners play a critical role in the development of trust in JVs. Nevertheless, the development of mutual trust is a cumulative and iterative process. Mutual trust is not achieved quickly, but rather through successive interactions between the parent firms. It is within this context that one should interpret the importance of cultivating an atmosphere of openness and ensuring continuous communication between the partners. It appears that the sharing of operational control may provide an effective basis for supporting such communication, and thus the emergence of mutual trust.

In addition, by the position he/she occupies in relation to parent firms the JVGM appears to have an important role in this process. The JVGM may well initiate and support exchanges and communications between parent firms, and thus cultivate an atmosphere of mutual trust and cooperation in the JV. Therefore, the ability to support the development of effective communication and of a trustful relationship between the parent firms could represent one of the key tasks and responsibilities of JVGMs, by extension, an important criterion for their selection.

Suggestions for effective exercise of control

The study's findings suggested that the use of the same control and autonomy structures for all activities of JVs as well as for both IJVs and DJVs was not the optimal approach. In fact, the use of control and autonomy structures should take into account that not all dimensions of control and autonomy have the same effect on the performance of JVs. In addition, these structures should be adapted to the international nature as well as to the age of the JVs (See Table 11-3).

Particularly, some control sharing and autonomy structures are likely to yield different results in IJVs, compared to DJVs. The case of the sharing of strategic control and technological autonomy is most salient in this regard. IJVs provided with limited technological autonomy are expected to exhibit higher performance. Generally formed to exploit a foreign technology in the Canadian market, the success of these ventures depends on the technical support received from parent firms. In contrast, DJVs will exhibit higher performance and will remain in operation longer if they have extensive technological autonomy. Since technological motivations are typically of less importance in DJVs, these ventures do not require the same relationship with parents, and can benefit from distancing themselves technologically from parent firms.

Similarly, the sharing of strategic control is expected to result in higher

parent firm satisfaction in IJVs, but in lower satisfaction in DJVs. In other words, the involvement of both parent firms in strategic-level decisions appears preferable in IJVs. In turn, the presence of a dominant partner for strategic decisions will be the appropriate option in DJVs, since the sharing of strategic control may result in parent discontentment in DJVs.

TABLE 11-3
Control sharing and autonomy structures in IJVs and DJVs

| STRUCTURE | DJVs | IJVs |
|----------------------------------|--|--|
| SHARING OF OPERATIONAL CONTROL | Trust (+) | Trust (+) Overall performance (+) |
| SHARING OF TECHNOLOGICAL CONTROL | Satisfaction (+) Mutual satisfaction (+) Overall performance (+) | - |
| SHARING OF STRATEGIC CONTROL | Satisfaction (-) | Satisfaction (+) Overall performance (+) |
| OPERATIONAL AUTONOMY | Mutual satisfaction (+) Conflict (-) | Conflict (-) |
| TECHNOLOGICAL AUTONOMY | Overall performance (+) Duration (+) | Overall performance (-) Business performance (-) |
| STRATEGIC AUTONOMY | Satisfaction (+) Business performance (+) Conflict (-) | Satisfaction (+) Business performance (+) Conflict (-) |

Note: (+) Positive relationship
(-) Negative relationship

In sum, maintaining a close relationship with parent firms at the technological level, as well as relying on shared strategic and operational control, are all expected to have positive effects on the performance of IJVs. However,

in DJVs performance and parent firm satisfaction are linked on the ventures' ability to distance themselves technologically from parent firms, and to the use of shared control over technological decisions.

Nevertheless, some structures may be effective in both types of JVs. Both IJVs and DJVs with extensive strategic and operational autonomy should be expected to exhibit better performance and involve less frequent conflict. In addition, control sharing and autonomy structures may represent more important determinants of performance in recently-formed JVs compared to older more established ventures. In fact, the management structure of JVs should receive particular attention at the time of formation and at the beginning of their activities. In turn, in older JVs, control and autonomy issues may be of less importance for their performance.

When devising the management structure of JVs, managers should understand that exercising considerable control in terms of breadth and extent, or dominant control over an array of activities may not be necessary, or even desirable, for achieving higher JV performance. In fact, managers should consider that the exercise of control implies important commitments in terms of responsibility, resources, and senior management time. Consequently, the exercise of extensive control over a JV can generate important governance and bureaucratic costs which may offset the benefits from the JV.

Furthermore, it appears critical for managers to avoid limiting themselves to a global and overall perspective of control. Managers may seek to achieve an incontestable and unambiguous control over their JVs. This desire to "be in control" may be motivated by the necessity of protecting the parent's interests as well as proprietary assets. It may also represent a mechanism for reducing uncertainty, particularly with regard to effective coordination and implementation of strategy. The critical issue for a parent firm, however, is to control only those activities and decisions which will enable it to successfully implement its strategy, without incurring costs and effects which would harm the performance of the JV and outweigh the gains from cooperation. Among others, the creation of an executive committee with one or two parent firm senior managers may further reduce the costs associated with the exercise of control. The presence of this committee may facilitate communication and consensus-building, speed up decision making and reduce the need for JV board meetings.

Finally, the costs and complexities associated with the formation and management of a JV are undeniably high. However, managers have appeared to overlook some of these costs and complexities. With the increasing number of JVs being formed, several firms appeared to pursue a "me-too" strategy and to rush into alliances, without closely considering all options. The failure and performance problems of several JVs were thought to be not solely a matter of the control and autonomy structures in place. Problems in these ventures raised the fundamental question of whether they were the appropriate instruments for

achieving the parent firms' objectives. Consequently, managers should carefully ponder the desirability of forming JVs.

4. Limitations of the study

This study attempted to enhance understanding of the relationship between the division of control and the performance of JVs. While it provided evidence regarding the nature and strength of this relationship, the findings must be interpreted in light of some conceptual and methodological limitations.

Conceptual limitations

The conceptual limitations of the study pertain to the nature of the relationships proposed in the research model. The research model proposed linear and recursive causal relationships between constructs. It is important to recognize that these relationships are most often iterative and interactive. The process involved in the development of mutual trust in a JV can be a good example of such a relationship. Furthermore, the study's cross-sectional design did not allow close examination of the process involved in the development of inter-partner relationships in JVs. This design also considerably limited the possibility of making causal conclusions regarding the relationships proposed in the research model.

In addition, the potential moderating effects of constructs related to characteristics of JVs, such as the industry, and their vertical versus horizontal nature, were not included in the model. Although sample size was larger than that found in most studies on JVs, it was not large enough to test the moderating effect of these different variables with consistent data analysis approaches. Still, the study accounted for the potential moderating effects of the international nature of JVs. Furthermore, by examining more recently-formed JVs, the study accounted for possible selection bias in the sample, and for the potential moderating effect of the age of the JVs. The model also excluded constructs related to the partner selection process which could have had effects on levels of trust, conflict, and satisfaction in JVs.

Nevertheless, these conceptual limitations do not represent threats to the validity of the results. Rather, they limit the possibility of drawing causal conclusions from the evidence provided. While related to the study's focus and research questions, they represent directions for future research on JVs.

Methodological limitations

The cross-sectional and ex post facto research design used in the study represents its main methodological limitations. This design may be inherently ineffective in controlling for potential biases associated with selection and history effects (Cook and Campbell, 1979). In addition, such a design provides only a

static perspective on a dynamic phenomenon. Collected data may not offer a representative image of the JVs, or account for their continuous evolution. The impact of these limitations may have been reduced by the examination of the entire population of qualifying JVs. Indeed, this study had characteristics of a census, and did not rely on a sample drawn from a larger population. However, the use of a longitudinal design would have helped to overcome these problems and to control for potential biases. It would also have provided better insight into the iterative and interactive processes associated with the relationships studied in this research.

In addition, while causality was suggested in the hypotheses, OLS regression analysis allows little confidence in making a causal interpretation of the results. OLS regression analysis also assumes relationships to be linear and recursive, and thus, does not account for curvilinear, exponential, or interactive relationships. For instance, the presence of interaction effects in the relationship between control sharing and mutual trust could be suggested. While the presence of control sharing may support the development of trust, in return, this trust may encourage parent firms to share control further. Such interaction was not considered in OLS regression analysis. In this context, the use of advanced causal modelling techniques such as PLS or LISREL would allow causal inferences to be made with greater confidence.

The study's sample size, its use of a substitution method for missing data,

and the mixed results of the multi-source approach also represent a main methodological limitation. In fact, the study's multi-source approach attempting to collect data from both parent firms and the JVGM was only partly effective. Data were collected from the three potential sources for a minority of JVs, while there were 31 JVs with data from a single source. The study's sample size was too small to allow consistency in the test of the moderating effect of the age and the international nature of JVs. The small sample size reduced the power of some statistical tests and may explain some non-significant results. Finally, the use of a substitution method for missing data may have impaired the quality of the data, and may have affected the generalizability of the study's results.

However, the substitution method used in the study was selected because it minimized negative impacts on the data. Its use was consistent with prior research on inter-organizational relationships and JVs, and empirically supported by a test of the perceptual convergence among sources. The study's sample size was also larger than in most prior studies on JVs. Furthermore, since population characteristics were available, investigation of the sample for potential biases suggested that it was representative of the population.

Another methodological limitation involves the possible effect of common method variance. Data for all constructs were collected from a self-report instrument. As a result, associations between constructs could be due to their measurement with the same method, rather than to the presence of a real

relationship. However, the impact of this method effect was believed to be limited, for three reasons. First, aggregation of data from multiple sources was thought to reduce potential common method effects considerably (Kavanaugh, McKinney, and Wolins, 1971). Second, the absence of an *a priori* positive link between the extent of control sharing and performance, as well as the phrasing of questions and response scales, were expected to diminish the risks of causal attribution and implicit theories. Third, the study collected perceptual data from key informants. It was believed that it was these informants' perceptions that guided and influenced their behaviors and attitudes regarding the JVs. Thus, it appeared necessary to rely primarily on perceptual self-report data for hypothesis testing, rather than on objective measures.

In contrast to other constructs, the validity of the construct of commitment received weak support. The cross-sectional nature of the research design used in this study, and the conceptual proximity between trust and commitment, were invoked to explain these results. Consequently, elements of this construct were combined with items of trust to form the trust/commitment construct. Basically, this methodological limitation highlights the need for further research on commitment and its association with other relationship dynamics constructs.

5. Directions for future research

Additional research is required on the factors influencing performance,

trust, commitment, and conflict in JVs. Results suggested that factors other than control sharing and autonomy could be more effective in explaining the performance and inter-partner relationship dynamics of JVs. Such research appears particularly important in the case of trust, commitment and conflict, since these constructs demonstrated strong relationships with the performance of JVs. Future research could examine the influence of variables such as the partner selection process, the partners' characteristics, and the partners' contributions, on the dynamics of inter-partner relationships. Similarly, the survival and duration of JVs, and the related parent firms' decisions, remain to be fully explained.

To complement this study's focus, future research could examine the control mechanisms used by parent firms, and their effects on the performance and relationship dynamics of JVs. Building from Schaan (1983), such research could investigate whether some combination of control structures and mechanisms, or simply some control mechanisms, are more effective than others. In addition, the extent to which the effectiveness of control sharing and autonomy is contingent on the parent firms' strategy and the JVs' strategic role could be studied. This could lead to the identification of control and autonomy structures allowing the achievement of specific strategic objectives. Another promising research avenue involves a closer look at the role of the JVGM for the performance and relationship dynamics of JVs.

Furthermore, a longitudinal study of the effects of control sharing and

autonomy on the performance and relationship dynamics of JVs appears to be required. Such a study would allow the examination of the evolution of trust, commitment, and conflict in JVs. It could enhance understanding of the possible interaction effects among these constructs, as well as between them and JV performance. In addition, a larger sample could permit the use of LISREL to test the causality and directionality of these relationships more rigorously.

The weak support for the validity of the construct of commitment highlighted the need for further research on this construct and on other relationship dynamics constructs. Examination of the relationships between commitment and performance outcomes, as well as with other relationship dynamics constructs, such as trust and conflict, is particularly warranted. This could shed some light on the close association between trust and commitment.

Finally, further research is required on the determinants of control and autonomy patterns in JVs. Prior research has mostly focused on the impact of bargaining power on the division of equity, without much attention to how different factors, such as the parent firms' strategic motivations and contributions to the JV, as well as the JV's industry structure, influence both the extent and the focus of their control efforts. Patterns of control sharing and autonomy could be further investigated in order, for instance, to develop a typology of control and autonomy structures as well as to assess these structures' relative effectiveness.

APPENDIX 1
QUESTIONNAIRE



The UNIVERSITY of WESTERN ONTARIO
School of Business Administration

MANAGEMENT OF JOINT VENTURES
RESEARCH QUESTIONNAIRE

Please complete this questionnaire even if the joint venture is no longer in operation

BACKGROUND INFORMATION ON THE JOINT VENTURE (JV)

1. a. Your name and position: _____
b. The name of the joint venture (JV): _____
c. The JV's main product: _____
d. Year the JV was formed: _____
e. Name and percentage ownership of the JV's parent firms, at the time the JV was formed

Percent Owned

Parent 1: _____ %

Parent 2: _____ %

2. In its most recent/last year of operation, which of these activities were performed by the JV? (Circle all that apply)

Research &
Development

Design &
Engineering

Production

Marketing

Distribution

Customer
Service

2

3. Which of the following best describes the relationship between the joint venture (JV) and the parent firms' activities? (Check one per parent)

a. Parent 1

- The JV is in the same product and geographic market area as Parent 1's existing activities.
- The JV provides product diversification for Parent 1's existing activities.
- The JV provides geographic market diversification for Parent 1's activities.
- The JV provides product and geographic market diversification for Parent 1's activities.
- The JV provides backward integration toward raw materials for Parent 1's activities.
- The JV provides forward integration toward markets for Parent 1's activities.
- Other (specify): _____

b. Parent 2

- The JV is in the same product and geographic market area as Parent 2's existing activities.
- The JV provides product diversification for Parent 2's existing activities.
- The JV provides geographic market diversification for Parent 2's activities.
- The JV provides product and geographic market diversification for Parent 2's activities.
- The JV provides backward integration toward raw materials for Parent 2's activities.
- The JV provides forward integration toward markets for Parent 2's activities.
- Other (specify): _____

4. When the JV was formed, to what extent were the following resources contributed by each of the parent firms to the venture? (Circle one per item; circle NA if not applicable)

| | Mainly by parent 1 | | By both parents | | Mainly by parent 2 | | Not applicable |
|-------------------------------------|--------------------|---|-----------------|---|--------------------|--|----------------|
| General Management expertise | 2 | 1 | 0 | 1 | 2 | | NA |
| Financial resources | 2 | 1 | 0 | 1 | 2 | | NA |
| Technology/engineering of product | 2 | 1 | 0 | 1 | 2 | | NA |
| Process technology | 2 | 1 | 0 | 1 | 2 | | NA |
| Manufacturing capabilities | 2 | 1 | 0 | 1 | 2 | | NA |
| Research and development | 2 | 1 | 0 | 1 | 2 | | NA |
| Raw materials and components | 2 | 1 | 0 | 1 | 2 | | NA |
| Patents, licenses, trademarks, etc. | 2 | 1 | 0 | 1 | 2 | | NA |
| Costs control | 2 | 1 | 0 | 1 | 2 | | NA |
| Technical personnel | 2 | 1 | 0 | 1 | 2 | | NA |
| Non-technical personnel | 2 | 1 | 0 | 1 | 2 | | NA |
| Marketing | 2 | 1 | 0 | 1 | 2 | | NA |
| Distribution channels | 2 | 1 | 0 | 1 | 2 | | NA |
| Manufacturing facilities | 2 | 1 | 0 | 1 | 2 | | NA |

5. When the JV was formed and in its most recent/last year of operation, how advanced was the JV's technology compared to what was used by primary competitors? (Circle one per item)

| | At the JV's formation | | | | | | Most recent/last year of operation | | | | | |
|--------------------|-----------------------|----|------|----|--------------------|----|------------------------------------|----|------|----|--------------------|----|
| | Much less advanced | | Same | | Much more advanced | | Much less advanced | | Same | | Much more advanced | |
| Process technology | -2 | -1 | 0 | +1 | +2 | NA | -2 | -1 | 0 | +1 | +2 | NA |
| Product technology | -2 | -1 | 0 | +1 | +2 | NA | -2 | -1 | 0 | +1 | +2 | NA |

4. When the JV was formed, to what extent were the following resources contributed by each of the parent firms to the JV? (Circle one response per item; circle NA if not applicable)

| | Mainly by your firm | By both firms | Mainly by partner firm | Not applicable | | |
|-------------------------------------|------------------------|------------------|---------------------------|-------------------|---|----|
| General management expertise | 2 | 1 | 0 | 1 | 2 | NA |
| Financial resources | 2 | 1 | 0 | 1 | 2 | NA |
| Technology/engineering of product | 2 | 1 | 0 | 1 | 2 | NA |
| Process technology | 2 | 1 | 0 | 1 | 2 | NA |
| Manufacturing capabilities | 2 | 1 | 0 | 1 | 2 | NA |
| Research and development | 2 | 1 | 0 | 1 | 2 | NA |
| Raw materials and components | 2 | 1 | 0 | 1 | 2 | NA |
| Patents, licenses, trademarks, etc. | 2 | 1 | 0 | 1 | 2 | NA |
| Costs control | 2 | 1 | 0 | 1 | 2 | NA |
| Technical personnel | 2 | 1 | 0 | 1 | 2 | NA |
| Non-technical personnel | 2 | 1 | 0 | 1 | 2 | NA |
| Marketing | 2 | 1 | 0 | 1 | 2 | NA |
| Distribution channels | 2 | 1 | 0 | 1 | 2 | NA |
| Manufacturing facilities | 2 | 1 | 0 | 1 | 2 | NA |

5. How important were each of the following objectives in your firm's and your partner firm's decision to establish this JV? (Circle one per item; circle NA if unsure or not applicable)

| | Your firm | | | Your partner | | | | | | | | |
|--|-------------------|-------------------------|------------------|-------------------|-------------------------|------------------|---|---|---|---|---|----|
| | Very important | Moderately important | Not important | Very important | Moderately important | Not important | | | | | | |
| Spread risk by having partner | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |
| Reduce capital investment | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |
| Obtain access to marketing skills | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |
| Access distribution channels | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |
| Obtain partner's technology, knowhow, patents, trademarks, etc. | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |
| Facilitate rapid market entry | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |
| Promote development of new product | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |
| Obtain raw materials/components | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |
| Exploit your firm's technology | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |
| Reduce costs/risks of technology development | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |

6. To what extent have these objectives been achieved? (Circle one per item; circle NA if not applicable)

| | Your firm | | | Your partner | | | | | | | | |
|--|-------------------------|--------------------|--------------------------|-------------------------|--------------------|--------------------------|---|---|---|---|---|----|
| | Very great extent | Moderate extent | Very little extent | Very great extent | Moderate extent | Very little extent | | | | | | |
| Spread risk by having partner | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |
| Reduce capital investment | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |
| Obtain access to marketing skills | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |
| Access distribution channels | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |
| Obtain partner's technology, knowhow, patents, trademarks, etc. | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |
| Facilitate rapid market entry | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |
| Promote development of new product | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |
| Obtain raw materials/components | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |
| Exploit your firm's technology | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |
| Reduce costs/risks of technology development | 4 | 3 | 2 | 1 | 0 | NA | 4 | 3 | 2 | 1 | 0 | NA |

MANAGEMENT OF THE JOINT VENTURE

1. When the JV was established and in its most recent/last year of operation, how was control over each of the following decisions allocated between your firm and your partner? (Circle one response per item; circle NA if not applicable)

| | At the JV's formation | | Most recent year of operation | | | |
|--|-----------------------|---------------|-------------------------------|----|---|----|
| | You control | Share control | Partner controls | NA | | |
| Hiring/firing of JV general manager | 2 | 1 | 0 | 1 | 2 | NA |
| Hiring/firing of JV senior managers | 2 | 1 | 0 | 1 | 2 | NA |
| Obtaining financing for the venture | 2 | 1 | 0 | 1 | 2 | NA |
| Day-to-day management of venture | 2 | 1 | 0 | 1 | 2 | NA |
| Deciding major capital expenditures | 2 | 1 | 0 | 1 | 2 | NA |
| Technology/engineering of product | 2 | 1 | 0 | 1 | 2 | NA |
| Location of JV facilities | 2 | 1 | 0 | 1 | 2 | NA |
| Sourcing of raw materials/components | 2 | 1 | 0 | 1 | 2 | NA |
| Costs control | 2 | 1 | 0 | 1 | 2 | NA |
| Patents, licenses, trademarks, etc. | 2 | 1 | 0 | 1 | 2 | NA |
| Manufacturing | 2 | 1 | 0 | 1 | 2 | NA |
| Process technology | 2 | 1 | 0 | 1 | 2 | NA |
| Research and development | 2 | 1 | 0 | 1 | 2 | NA |
| Pricing | 2 | 1 | 0 | 1 | 2 | NA |
| Marketing | 2 | 1 | 0 | 1 | 2 | NA |
| Distribution channels | 2 | 1 | 0 | 1 | 2 | NA |
| Hiring/firing of technical personnel | 2 | 1 | 0 | 1 | 2 | NA |
| Hiring/firing of non-technical personnel | 2 | 1 | 0 | 1 | 2 | NA |

2. When the JV was established and in its most recent/last year of operation, how was control over each of the following decisions allocated between JV managers and the parent firms? (Circle one per item; circle NA if not applicable)

| | At the JV's formation | | | Most recent year of operation | | |
|--|---|---|---|---|---|---|
| | Decided Totally by JV managers | Shared equally by parent and JV managers | Decided totally by parent managers | Decided totally by JV managers | Shared equally by parent and JV managers | Decided totally by parent managers |
| Hiring/firing of JV senior managers | 2 | 1 | 0 | 1 | 2 | NA |
| Obtaining financing for the venture | 2 | 1 | 0 | 1 | 2 | NA |
| Day-to-day management of venture | 2 | 1 | 0 | 1 | 2 | NA |
| Deciding major capital expenditures | 2 | 1 | 0 | 1 | 2 | NA |
| Technology/engineering of product | 2 | 1 | 0 | 1 | 2 | NA |
| Location of JV facilities | 2 | 1 | 0 | 1 | 2 | NA |
| Sourcing of raw materials/components | 2 | 1 | 0 | 1 | 2 | NA |
| Costs control | 2 | 1 | 0 | 1 | 2 | NA |
| Patents, licenses, trademarks, etc. | 2 | 1 | 0 | 1 | 2 | NA |
| Manufacturing | 2 | 1 | 0 | 1 | 2 | NA |
| Process technology | 2 | 1 | 0 | 1 | 2 | NA |
| Research and development | 2 | 1 | 0 | 1 | 2 | NA |
| Pricing | 2 | 1 | 0 | 1 | 2 | NA |
| Marketing | 2 | 1 | 0 | 1 | 2 | NA |
| Distribution channels | 2 | 1 | 0 | 1 | 2 | NA |
| Hiring/firing of technical personnel | 2 | 1 | 0 | 1 | 2 | NA |
| Hiring/firing of non-technical personnel | 2 | 1 | 0 | 1 | 2 | NA |

6

RELATIONSHIPS WITH PARTNER AND JOINT VENTURE

1. Please indicate your agreement or disagreement with the following statements.
(Circle one per item)

| | Strongly disagree | Neither disagree nor agree | | | Strongly agree |
|--|-------------------|----------------------------|---|----|----------------|
| It would be easier for my firm to replace our partner than for our partner to replace us. | -2 | -1 | 0 | +1 | +2 |
| This JV's failure would be more costly for my firm than for our partner. | -2 | -1 | 0 | +1 | +2 |
| My firm is not committed to this JV. | -2 | -1 | 0 | +1 | +2 |
| My firm has to watch everything our partner does in the JV. | -2 | -1 | 0 | +1 | +2 |
| Our JV with this partner is a long term alliance. | -2 | -1 | 0 | +1 | +2 |
| My firm helps our partner out in whatever ways they ask. | -2 | -1 | 0 | +1 | +2 |
| My firm is continually looking for another partner to replace the current one. | -2 | -1 | 0 | +1 | +2 |
| My firm has a high degree of trust in this partner. | -2 | -1 | 0 | +1 | +2 |
| My firm is willing to dedicate whatever people and resources it takes to make this JV a success. | -2 | -1 | 0 | +1 | +2 |
| If another company would offer to form a JV, my firm would accept, even if it meant dropping this partner. | -2 | -1 | 0 | +1 | +2 |
| My firm wants to be patient and to make this JV work. | -2 | -1 | 0 | +1 | +2 |
| Our partner is a company that stands by its word. | -2 | -1 | 0 | +1 | +2 |
| Our partner helps my firm in whatever ways we ask. | -2 | -1 | 0 | +1 | +2 |
| Our partner and my firm actively work together as partners. | -2 | -1 | 0 | +1 | +2 |
| My firm and our partner are very contented with all aspects of the JV. | -2 | -1 | 0 | +1 | +2 |
| My firm and our partner are very contented with the JV's performance. | -2 | -1 | 0 | +1 | +2 |
| My firm and our partner are very contented with the relationship between us. | -2 | -1 | 0 | +1 | +2 |

2. How frequently has your firm had disagreements with your partner regarding the following aspects of the venture? (Circle one per item)

| | Constantly | | | | Never | | | |
|---|------------|---|---|---|-------|--|--|--|
| The objectives of the JV | 5 | 4 | 3 | 2 | 1 | | | |
| The general management of the JV | 5 | 4 | 3 | 2 | 1 | | | |
| The research and development of the JV | 5 | 4 | 3 | 2 | 1 | | | |
| The relative control of each parent over the JV | 5 | 4 | 3 | 2 | 1 | | | |
| The manufacturing of the JV | 5 | 4 | 3 | 2 | 1 | | | |
| The technology of the JV | 5 | 4 | 3 | 2 | 1 | | | |
| The capital expenditures of the JV | 5 | 4 | 3 | 2 | 1 | | | |
| The marketing of the JV | 5 | 4 | 3 | 2 | 1 | | | |

3. How would you assess yourself along the following dimensions, at the time you were hired as the JV's general manager? (Circle one per item)

| | Strong | | | | Weak | | | |
|--|--------|---|---|---|------|--|--|--|
| Leadership skills | 5 | 4 | 3 | 2 | 1 | | | |
| Knowledge of the JV's industry | 5 | 4 | 3 | 2 | 1 | | | |
| Interpersonal relations skills | 5 | 4 | 3 | 2 | 1 | | | |
| Motivation skills | 5 | 4 | 3 | 2 | 1 | | | |
| Familiarity with the JV's organization | 5 | 4 | 3 | 2 | 1 | | | |
| Conflict management skills | 5 | 4 | 3 | 2 | 1 | | | |
| Familiarity with Parent 1's organization | 5 | 4 | 3 | 2 | 1 | | | |
| Familiarity with Parent 2's organization | 5 | 4 | 3 | 2 | 1 | | | |
| Marketing expertise | 5 | 4 | 3 | 2 | 1 | | | |
| Manufacturing expertise | 5 | 4 | 3 | 2 | 1 | | | |
| Problem-solving skills | 5 | 4 | 3 | 2 | 1 | | | |
| Finance expertise | 5 | 4 | 3 | 2 | 1 | | | |

4. How long have you been the general manager of this JV? _____

5. Please indicate your agreement or disagreement with the following statements.
(Circle one per item)

| | Strongly disagree | Neither disagree nor agree | | | Strongly agree |
|--|-------------------|----------------------------|---|----|----------------|
| Parent 1 is not committed to the JV. | -2 | -1 | 0 | +1 | +2 |
| Parent 2 is not committed to the JV. | -2 | -1 | 0 | +1 | +2 |
| There is a high degree of trust between the parents. | -2 | -1 | 0 | +1 | +2 |
| Both parents are very contented with all aspects of the JV. | -2 | -1 | 0 | +1 | +2 |
| Both parents are very contented with the performance of the JV. | -2 | -1 | 0 | +1 | +2 |
| Both parents actively work together as partners. | -2 | -1 | 0 | +1 | +2 |
| Both parents are very contented with the relationship between them | -2 | -1 | 0 | +1 | +2 |

OPERATIONS AND PERFORMANCE OF THE JOINT VENTURE

1. Is the JV still operating? _____ Yes (go to 2) _____ No (go to a)
a. If it is no longer operating, what year did the venture end? _____
2. Since the JV's formation, did the percentage equity holdings of the partners change? (Check one)
_____ No _____ Yes (Specify what changes occurred): _____
3. What was the JV's approximate level of revenues at the end of its most recent/last year of operation? (Please circle one)

| | | | | | | | |
|-------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|--------------------|--------|
| under \$1 million | \$1 to \$5 million | \$6 to \$25 million | \$26 to \$50 million | \$51 to \$75 million | \$76 to \$100 million | over \$100 million | Uneure |
|-------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|--------------------|--------|

8

4. In its most recent/last year of operation, approximately what percentage of the JV's sales were in the following markets? (Your answers should sum to 100%)

- _____ % Canadian market
- _____ % U.S. market
- _____ % European market
- _____ % Asian market
- _____ % Other markets. Please identify: _____

5. How satisfied have Parent 1 and Parent 2 been with the following aspects of the JV?
(Circle one per item)

| | Parent 1 | | | | | Parent 2 | | | | |
|---------------------------------------|-------------------|----|----------------|----|----|-------------------|----|----------------|----|----|
| | Very dissatisfied | | Very satisfied | | | Very dissatisfied | | Very satisfied | | |
| The JV in general | -2 | -1 | 0 | +1 | +2 | -2 | -1 | 0 | +1 | +2 |
| The JV's performance | -2 | -1 | 0 | +1 | +2 | -2 | -1 | 0 | +1 | +2 |
| The JV general manager's performance | -2 | -1 | 0 | +1 | +2 | -2 | -1 | 0 | +1 | +2 |
| The relationship between the partners | -2 | -1 | 0 | +1 | +2 | -2 | -1 | 0 | +1 | +2 |

6. For each of the following, please rate the JV's actual performance versus initial expectations when the venture was formed. (Circle one per item; circle NA if not applicable)

| | Much below initial expectations | | About equal to initial expectations | | Much above initial expectations | Not applicable |
|-----------------------------------|---------------------------------|----|-------------------------------------|----|---------------------------------|----------------|
| Level of sales | -2 | -1 | 0 | +1 | +2 | NA |
| Market share | -2 | -1 | 0 | +1 | +2 | NA |
| Profitability | -2 | -1 | 0 | +1 | +2 | NA |
| Costs | -2 | -1 | 0 | +1 | +2 | NA |
| General management of the venture | -2 | -1 | 0 | +1 | +2 | NA |
| Research and development | -2 | -1 | 0 | +1 | +2 | NA |
| Technology/engineering of product | -2 | -1 | 0 | +1 | +2 | NA |
| Process technology | -2 | -1 | 0 | +1 | +2 | NA |
| Manufacturing | -2 | -1 | 0 | +1 | +2 | NA |
| Raw materials and components | -2 | -1 | 0 | +1 | +2 | NA |
| Marketing | -2 | -1 | 0 | +1 | +2 | NA |
| Distribution channels | -2 | -1 | 0 | +1 | +2 | NA |
| Overall performance | -2 | -1 | 0 | +1 | +2 | NA |

THANK YOU FOR PARTICIPATING IN THIS STUDY. PLEASE FAX OR MAIL THE COMPLETED QUESTIONNAIRE TO

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APPENDIX 2
Results from moderated regression analysis

A) Control sharing and JV performance

| Dependant Variables | Regression coefficients | | | R^2 | ΔR^2 | ΔF |
|--|-------------------------|-----------------------|-------------------|--------|--------------|------------|
| | Operational Control | Technological Control | Strategic Control | | | |
| | X IJV | X IJV | X IJV | | | |
| <u>INDIVIDUAL ASSESSMENTS^a</u> | | | | | | |
| Satisfaction | 0.01 (0.18) | -0.32# (0.17) | 0.08 (0.16) | 0.08# | 0.03 | 1.65 |
| Mutual satisfaction | 0.18 (0.18) | -0.17 (0.17) | 0.08 (0.16) | 0.05 | 0.01 | 0.58 |
| Business performance | 0.34# (0.18) | -0.13 (0.16) | 0.02 (0.15) | 0.12** | 0.02 | 1.22 |
| Overall performance | 0.46* (0.18) | -0.24 (0.16) | 0.27# (0.15) | 0.13** | 0.05 | 3.37* |
| Survival | 0.22 (0.18) | -0.17 (0.17) | 0.11 (0.16) | 0.06 | 0.01 | 0.82 |
| Duration | -0.35# (0.18) | -0.17 (0.16) | -0.10 (0.15) | 0.09# | 0.05 | 2.85* |
| <u>MUTUAL ASSESSMENTS^b</u> | | | | | | |
| Satisfaction | 0.27 (0.33) | -0.70* (0.31) | 0.02 (0.25) | 0.16# | 0.07 | 1.98 |
| Mutual satisfaction | 0.50 (0.33) | -0.76* (0.31) | -0.29 (0.25) | 0.15 | 0.08 | 2.14# |
| Business performance | 0.48 (0.33) | -0.41 (0.31) | -0.20 (0.25) | 0.16# | 0.04 | 0.96 |
| Overall performance | 0.71* (0.33) | -0.64* (0.31) | 0.04 (0.25) | 0.17# | 0.07 | 2.05 |
| Survival | 0.28 (0.34) | -0.22 (0.32) | 0.27 (0.26) | 0.08 | 0.03 | 0.70 |
| Duration | 0.01 (0.13) | -0.33 (0.13) | -0.12 (0.13) | 0.12 | 0.01 | 0.38 |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 170$ ^b $n = 60$

B) Control sharing and JV performance; JVs formed since 1980

| Dependant Variables | Regression coefficients | | | R^2 | ΔR^2 | ΔF |
|---|-------------------------|---------------------|---------------------|---------|--------------|------------|
| | Operational | Technological | Strategic | | | |
| | Control X IJV | Control X IJV | Control X IJV | | | |
| INDIVIDUAL ASSESSMENTS^a | | | | | | |
| Satisfaction | 0.15 (0.22) | -0.47* (0.21) | 0.04 (0.18) | 0.14* | 0.04 | 1.68 |
| Mutual satisfaction | 0.31 (0.22) | -0.29 (0.21) | 0.05 (0.18) | 0.12# | 0.02 | 0.94 |
| Business performance | 0.51* (0.20) | -0.24 (0.19) | 0.12 (0.17) | 0.28*** | 0.05 | 2.27# |
| Overall performance | 0.64** (0.20) | -0.48* (0.19) | 0.32# (0.17) | 0.23*** | 0.10 | 4.75** |
| Survival | 0.24 (0.23) | -0.24 (0.22) | 0.30 (0.19) | 0.08 | 0.04 | 1.40 |
| Duration | -0.13 (0.23) | -0.25 (0.22) | -0.23 (0.19) | 0.06# | 0.04 | 1.37 |
| MUTUAL ASSESSMENTS^b | | | | | | |
| Satisfaction | 0.44 (0.46) | -0.76 (0.59) | -0.02 (0.49) | 0.18 | 0.06 | 1.00 |
| Mutual satisfaction | 0.49 (0.46) | -0.45 (0.59) | -0.04 (0.49) | 0.17 | 0.03 | 0.48 |
| Business performance | 0.68# (0.41) | -0.38 (0.52) | -0.06 (0.43) | 0.36** | 0.05 | 1.16 |
| Overall performance | 0.89* (0.43) | -0.76 (0.55) | 0.11 (0.45) | 0.28* | 0.12 | 2.32# |
| Survival | 0.23 (0.47) | -0.44 (0.59) | 0.42 (0.49) | 0.16 | 0.08 | 1.33 |
| Duration | 0.18 (0.48) | -0.97 (0.60) | -0.56 (0.49) | 0.11 | 0.08 | 1.27 |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 108$ ^b $n = 41$

C) Control sharing and relationship dynamics

| Dependant Variables | Regression coefficients | | | R^2 | ΔR^2 | ΔF |
|---|---------------------------------|-----------------------------------|-------------------------------|-------|--------------|------------|
| | Operational Control X IJV | Technological Control X IJV | Strategic Control X IJV | | | |
| i) All JVs | | | | | | |
| <u>INDIVIDUAL ASSESSMENTS^a</u> | | | | | | |
| Trust/commitment | -0.05 (0.19) | 0.01 (0.17) | 0.01 (0.16) | 0.09* | 0.00 | 0.04 |
| Conflict | 0.07 (0.27) | -0.03 (0.24) | 0.28 (0.20) | 0.11# | 0.02 | 0.67 |
| <u>MUTUAL ASSESSMENTS^b</u> | | | | | | |
| Trust/commitment | 0.15 (0.37) | -0.13 (0.40) | 0.09 (0.34) | 0.17 | 0.01 | 0.14 |
| Conflict | -0.30 (0.46) | 0.31 (0.59) | 0.28 (0.49) | 0.20 | 0.02 | 0.36 |
| ii) JVs formed since 1980 | | | | | | |
| <u>INDIVIDUAL ASSESSMENTS^c</u> | | | | | | |
| Trust/commitment | 0.03 (0.32) | 0.02 (0.31) | 0.26 (0.27) | 0.12 | 0.01 | 0.30 |
| Conflict | -0.07 (0.23) | -0.05 (0.23) | 0.05 (0.19) | 0.11 | 0.00 | 0.12 |
| <u>MUTUAL ASSESSMENTS^d</u> | | | | | | |
| Trust/commitment | 0.19 (0.48) | -0.09 (0.57) | 0.10 (0.50) | 0.22 | 0.01 | 0.12 |
| Conflict | -0.36 (0.46) | 0.07 (0.55) | 0.44 (0.48) | 0.28 | 0.05 | 0.72 |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 170$ ^b $n = 61$ ^c $n = 108$ ^d $n = 41$

D) Autonomy and JV performance

| Dependant Variables | Regression coefficients | | | R^2 | ΔR^2 | ΔF |
|--|-------------------------|----------------------|----------------------|---------|--------------|------------|
| | Operational | Technological | Strategic | | | |
| | Autonomy X IJV | Autonomy X IJV | Autonomy X IJV | | | |
| <u>INDIVIDUAL ASSESSMENTS^a</u> | | | | | | |
| Satisfaction | -0.14 (0.14) | -0.18 (0.24) | 0.04 (0.13) | 0.07 | 0.01 | 0.80 |
| Mutual satisfaction | -0.39** (0.14) | -0.06 (0.24) | 0.09 (0.13) | 0.15*** | 0.05 | 3.49* |
| Business performance | -0.07 (0.14) | -0.30 (0.24) | 0.01 (0.13) | 0.07 | 0.02 | 1.92 |
| Overall performance | -0.04 (0.14) | -0.33 (0.24) | 0.02 (0.13) | 0.05 | 0.02 | 1.08 |
| Survival | -0.05 (0.14) | -0.25 (0.24) | 0.02 (0.13) | 0.07 | 0.01 | 0.65 |
| Duration | 0.17 (0.14) | -0.65* (0.24) | 0.31 (0.13) | 0.09* | 0.07 | 4.27** |
| <u>MUTUAL ASSESSMENTS^b</u> | | | | | | |
| Satisfaction | -0.41 (0.30) | 0.20 (0.37) | 0.15 (0.20) | 0.15 | 0.04 | 0.68 |
| Mutual satisfaction | -0.68* (0.30) | 0.19 (0.37) | 0.07 (0.20) | 0.29 | 0.10 | 2.54# |
| Business performance | -0.22 (0.30) | -0.06 (0.37) | 0.01 (0.20) | 0.14 | 0.01 | 0.22 |
| Overall performance | -0.18 (0.30) | 0.13 (0.37) | -0.03 (0.20) | 0.13 | 0.02 | 0.38 |
| Survival | 0.20 (0.30) | 0.04 (0.37) | 0.02 (0.20) | 0.13 | 0.01 | 0.30 |
| Duration | 0.19 (0.13) | -0.41 (0.13) | 0.31 (0.13) | 0.13 | 0.06 | 1.21 |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 170$ ^b $n = 60$

E) Autonomy and JV performance; JVs formed since 1980

| Dependant Variables | Regression coefficients | | | R^2 | ΔR^2 | ΔF |
|--|-------------------------|------------------|-----------------|---------|--------------|------------|
| | Operational | Technological | Strategic | | | |
| | Autonomy | Autonomy | Autonomy | | | |
| | X | X | X | | | |
| | IJV | IJV | IJV | | | |
| <u>INDIVIDUAL ASSESSMENTS^a</u> | | | | | | |
| Satisfaction | -0.04 (0.18) | 0.02* (0.27) | -0.36 (0.18) | 0.12# | 0.02 | 0.81 |
| Mutual satisfaction | -0.27 (0.17) | -0.23 (0.26) | -0.01 (0.17) | 0.19* | 0.04 | 1.80 |
| Business performance | 0.07 (0.16) | -0.52* (0.25) | 0.28# (0.17) | 0.22*** | 0.05 | 2.11# |
| Overall performance | 0.01 (0.17) | -0.52* (0.27) | 0.23 (0.18) | 0.14* | 0.05 | 1.89 |
| Survival | -0.10 (0.17) | 0.02 (0.27) | 0.03 (0.18) | 0.07 | 0.00 | 0.13 |
| Duration | -0.03 (0.18) | -0.57* (0.27) | 0.07 (0.18) | 0.08 | 0.05 | 1.79 |
| <u>MUTUAL ASSESSMENTS^b</u> | | | | | | |
| Satisfaction | -0.41 (0.35) | 0.15 (0.37) | 0.08 (0.30) | 0.28 | 0.04 | 0.58 |
| Mutual satisfaction | -0.58# (0.35) | -0.04 (0.37) | -0.04 (0.30) | 0.38* | 0.10 | 1.69 |
| Business performance | -0.09 (0.33) | -0.14 (0.34) | 0.28 (0.28) | 0.37* | 0.03 | 0.56 |
| Overall performance | -0.23 (0.35) | -0.13 (0.36) | 0.22 (0.30) | 0.30# | 0.04 | 0.68 |
| Survival | 0.34 (0.37) | -0.13 (0.39) | 0.01 (0.32) | 0.20 | 0.02 | 0.30 |
| Duration | 0.01 (0.39) | -0.40 (0.41) | -0.01 (0.34) | 0.12 | 0.04 | 0.51 |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 108$ ^b $n = 41$

F) Autonomy and relationship dynamics

| Dependant Variables | Regression coefficients | | | R ² | ΔR ² | ΔF |
|---|-------------------------|----------------------|----------------------|----------------|-----------------|------|
| | Operational | Technological | Strategic | | | |
| | Autonomy X IJV | Autonomy X IJV | Autonomy X IJV | | | |
| i) All JVs | | | | | | |
| <u>INDIVIDUAL ASSESSMENTS^a</u> | | | | | | |
| Trust/commitment | -0.37# (0.20) | 0.06 (0.34) | 0.19 (0.17) | 0.07 | 0.05 | 2.01 |
| Conflict | 0.02 (0.14) | -0.06 (0.23) | 0.01 (0.13) | 0.08# | 0.00 | 0.02 |
| <u>MUTUAL ASSESSMENTS^b</u> | | | | | | |
| Trust/commitment | -0.50 (0.30) | 0.29 (0.37) | 0.13 (0.20) | 0.14 | 0.05 | 1.13 |
| Conflict | -0.20 (0.30) | 0.06 (0.37) | -0.01 (0.23) | 0.17 | 0.01 | 0.20 |
| ii) JVs formed since 1980 | | | | | | |
| <u>INDIVIDUAL ASSESSMENTS^c</u> | | | | | | |
| Trust/commitment | -0.32 (0.31) | 0.34 (0.58) | 0.05 (0.32) | 0.10 | 0.03 | 0.62 |
| Conflict | -0.18 (0.17) | 0.02 (0.27) | 0.06 (0.18) | 0.15 | 0.01 | 0.38 |
| <u>MUTUAL ASSESSMENTS^d</u> | | | | | | |
| Trust/commitment | -0.39 (0.37) | 0.21 (0.39) | 0.21 (0.32) | 0.22 | 0.05 | 0.66 |
| Conflict | -0.45 (0.34) | 0.26 (0.36) | -0.10 (0.30) | 0.32# | 0.04 | 0.57 |

Standard errors are in parentheses.

$p < 0.10$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a $n = 170$ ^b $n = 60$ ^c $n = 108$ ^d $n = 41$

G) Control sharing, autonomy, JV performance and relationship dynamics; Individual assessments (n = 170)

| Dependent Variables | Control sharing | | | | Autonomy | | | | R ² | ΔR ² | ΔF |
|--------------------------------|---------------------|-----------------|-------------------|-----------------|----------------------|-------------------|--------------------|-----------------|----------------|-----------------|---------|
| | Operational Control | | Strategic Control | | Operational Autonomy | | Strategic Autonomy | | | | |
| | X | IJV | X | IJV | X | IJV | X | IJV | | | |
| <u>JV performance outcomes</u> | | | | | | | | | | | |
| Satisfaction | -0.11 (0.19) | -0.27 (0.17) | 0.23 (0.17) | 0.23 (0.16) | -0.10 (0.15) | -0.18 (0.25) | 0.03 (0.14) | 0.03 (0.14) | 0.16* | 0.05 | 1.61 |
| Mutual satisfaction | 0.01 (0.18) | -0.07 (0.16) | 0.23 (0.16) | 0.23 (0.16) | 0.37** (0.14) | -0.10 (0.24) | 0.06 (0.13) | 0.06 (0.13) | 0.20*** | 0.06 | 2.11# |
| Business performance | 0.22 (0.18) | -0.08 (0.17) | 0.15 (0.16) | 0.15 (0.16) | -0.06 (0.14) | -0.29# (0.24) | 0.02 (0.13) | 0.02 (0.13) | 0.18** | 0.03 | 0.85 |
| Overall performance | 0.37* (0.18) | -0.21 (0.17) | 0.39* (0.17) | 0.39* (0.17) | -0.00 (0.20) | -0.39 (0.24) | 0.06 (0.13) | 0.06 (0.13) | 0.17** | 0.07 | 2.25* |
| Survival | -0.14 (0.19) | 0.14 (0.18) | -0.18 (0.18) | -0.18 (0.18) | 0.00 (0.15) | 0.35 (0.25) | -0.01 (0.14) | -0.01 (0.14) | 0.09 | 0.03 | 0.73 |
| Duration | -0.42* (0.18) | -0.20 (0.17) | 0.05 (0.17) | 0.05 (0.17) | 0.25 (0.14) | -0.77** (0.25) | 0.25 (0.14) | 0.25 (0.14) | 0.19** | 0.13 | 4.45*** |
| <u>Relationship dynamics</u> | | | | | | | | | | | |
| Trust/commitment | -0.06 (0.29) | 0.15 (0.26) | 0.26 (0.23) | 0.26 (0.23) | -0.35 (0.21) | 0.03 (0.34) | 0.12 (0.19) | 0.12 (0.19) | 0.15 | 0.05 | 1.12 |
| Conflict | 0.05 (0.19) | 0.01 (0.17) | -0.09 (0.17) | -0.09 (0.17) | 0.04 (0.15) | -0.08 (0.25) | 0.02 (0.14) | 0.02 (0.14) | 0.16* | 0.00 | 0.11 |

Standard errors are in parentheses
p < 0.10 * p < 0.05 ** p < 0.01 *** p < 0.001

H) Control sharing, autonomy, JV performance and relationship dynamics; Mutual assessments (n = 60)

| Dependent Variables | Control sharing | | | | Autonomy | | | | R ² | ΔR ² | ΔF |
|--------------------------------|-----------------------|-------------------------|---------------------|-----|------------------------|--------------------------|----------------------|-----|----------------|-----------------|------|
| | Operational Control X | Technological Control X | Strategic Control X | IJV | Operational Autonomy X | Technological Autonomy X | Strategic Autonomy X | IJV | | | |
| <u>JV performance outcomes</u> | | | | | | | | | | | |
| Satisfaction | -0.20 (0.34) | -0.36 (0.56) | 0.85* (0.34) | | -0.03 (0.38) | -0.30 (0.45) | -0.03 (0.24) | | 0.31# | 0.16 | 1.80 |
| Mutual satisfaction | 0.08 (0.33) | -0.46 (0.55) | 0.46 (0.33) | | -0.38 (0.38) | -0.08 (0.43) | 0.02 (0.22) | | 0.35* | 0.11 | 1.38 |
| Business performance | 0.10 (0.35) | 0.27 (0.59) | 0.30 (0.36) | | -0.14 (0.41) | 0.03 (0.47) | -0.09 (0.24) | | 0.23 | 0.02 | 0.24 |
| Overall performance | 0.30 (0.35) | -0.24 (0.59) | 0.71* (0.35) | | 0.01 (0.24) | -0.18 (0.48) | 0.05 (0.24) | | 0.23 | 0.09 | 0.93 |
| Survival | 0.16 (0.36) | -0.21 (0.60) | -0.51 (0.36) | | 0.12 (0.42) | 0.20 (0.49) | 0.13 (0.25) | | 0.21 | 0.05 | 0.51 |
| Duration | -0.10 (0.36) | -0.35 (0.60) | 0.50 (0.35) | | 0.49 (0.41) | -0.77 (0.48) | 0.04 (0.25) | | 0.22 | 0.07 | 0.76 |
| <u>Relationship dynamics</u> | | | | | | | | | | | |
| Trust/commitment | 0.22 (0.35) | -0.70 (0.59) | 0.16 (0.35) | | -0.24 (0.41) | 0.08 (0.47) | 0.10 (0.24) | | 0.25 | 0.06 | 0.62 |
| Conflict | -0.25 (0.34) | 0.86 (0.58) | 0.01 (0.34) | | -0.52 (0.38) | 0.28 (0.46) | 0.04 (0.24) | | 0.30 | 0.06 | 0.61 |

Standard errors are in parentheses.
 # p < 0.10 * p < 0.05 ** p < 0.01 *** p < 0.001

I) Control sharing, autonomy, JV performance and relationship dynamics; Individual assessments
 JVs formed since 1980 (n = 125)

| Dependent Variables | Control sharing | | | Autonomy | | | R ² | ΔR ² | ΔF |
|--------------------------------|---------------------------|-----------------------------|-------------------------|----------------------------|------------------------------|--------------------------|----------------|-----------------|--------|
| | Operational Control X IJV | Technological Control X IJV | Strategic Control X IJV | Operational Autonomy X IJV | Technological Autonomy X IJV | Strategic Autonomy X IJV | | | |
| <u>JV performance outcomes</u> | | | | | | | | | |
| Satisfaction | -0.06 (0.23) | -0.38# (0.22) | 0.19 (0.20) | -0.00 (0.18) | -0.41 (0.30) | 0.00 (0.18) | 0.22* | 0.06 | 1.26 |
| Mutual satisfaction | 0.09 (0.22) | -0.12 (0.22) | 0.14 (0.20) | -0.30# (0.18) | -0.22 (0.30) | -0.05 (0.17) | 0.25** | 0.05 | 1.14 |
| Business performance | 0.29 (0.20) | -0.15 (0.20) | 0.29 (0.18) | -0.07 (0.16) | -0.62* (0.26) | 0.19 (0.16) | 0.38*** | 0.07 | 1.89# |
| Overall performance | 0.45* (0.21) | -0.40# (0.21) | 0.53** (0.19) | 0.08 (0.17) | -0.75** (0.28) | 0.17 (0.16) | 0.32*** | 0.15 | 3.48** |
| Survival | -0.23 (0.24) | 0.21 (0.24) | -0.28 (0.22) | 0.05 (0.19) | 0.10 (0.32) | -0.02 (0.19) | 0.10 | 0.03 | 0.58 |
| Duration | -0.15 (0.24) | -0.28 (0.24) | -0.04 (0.21) | 0.03 (0.19) | -0.56# (0.32) | 0.10 (0.19) | 0.11 | 0.07 | 1.32 |
| <u>Relationship dynamics</u> | | | | | | | | | |
| Trust/commitment | -0.14 (0.34) | 0.15 (0.33) | 0.21 (0.32) | -0.33 (0.35) | 0.23 (0.67) | 0.04 (0.32) | 0.19 | 0.04 | 0.47 |
| Conflict | 0.03 (0.23) | 0.00 (0.22) | 0.03 (0.21) | -0.11 (0.18) | 0.02 (0.18) | -0.07 (0.31) | 0.20* | 0.01 | 0.13 |

Standard errors are in parentheses
 # p < 0.10 * p < 0.05 ** p < 0.01 *** p < 0.001

J) Control sharing, autonomy, JV performance and relationship dynamics; Mutual assessments
 JVs formed since 1980 (n = 45)

| Dependent Variables | Control sharing | | | | Autonomy | | | | R ² | ΔR ² | ΔF | |
|--------------------------------|---------------------|-----|-------------------|-----|----------------------|-----|--------------------|-----|----------------|-----------------|------|--|
| | Operational Control | | Strategic Control | | Operational Autonomy | | Strategic Autonomy | | | | | |
| | X | IJV | X | IJV | X | IJV | X | IJV | | | | |
| <u>JV performance outcomes</u> | | | | | | | | | | | | |
| Satisfaction | -0.09 (0.43) | | -0.71 (0.64) | | 0.74# (0.40) | | -0.44 (0.46) | | 0.47# | 0.16 | 1.37 | |
| Mutual satisfaction | 0.08 (0.34) | | -0.44 (0.67) | | 0.48 (0.42) | | -0.32 (0.45) | | 0.46 | 0.13 | 1.06 | |
| Business performance | 0.06 (0.33) | | -0.03 (0.64) | | 0.19 (0.40) | | -0.38 (0.45) | | 0.49# | 0.03 | 0.24 | |
| Overall performance | 0.16 (0.36) | | -0.58 (0.69) | | 0.59 (0.14) | | -0.50 (0.46) | | 0.39 | 0.10 | 0.74 | |
| Survival | 0.02 (0.39) | | -0.20 (0.76) | | -0.56 (0.48) | | 0.06 (0.54) | | 0.27 | 0.06 | 0.35 | |
| Duration | -0.18 (0.39) | | -1.12 (0.77) | | -0.00 (0.42) | | -0.68 (0.55) | | 0.25 | 0.13 | 0.78 | |
| <u>Relationship dynamics</u> | | | | | | | | | | | | |
| Trust/commitment | 0.38 (0.35) | | -0.93 (0.68) | | -0.02 (0.43) | | 0.14 (0.49) | | 0.41 | 0.06 | 0.50 | |
| Conflict | -0.27 (0.32) | | 0.97 (0.63) | | 0.14 (0.39) | | 0.25 (0.45) | | 0.50# | 0.08 | 0.70 | |

Standard errors are in parentheses.
 # p < 0.10 * p < 0.05 ** p < 0.01 *** p < 0.001

BIBLIOGRAPHY

Adler, Lee and James D. Hlavacek. 1976. Joint ventures for product innovation. New York, NY: AMACOM.

Aiken, Michael and Jerald Hage. 1968. Organizational interdependence and intra-organizational structure. American Sociological Review, 33: 912-930.

Alchian, A. Albert and Harold Demsetz. 1972. Production, information costs and economic organization. American Economic Review, 62: 777-795.

Aldrich, Howard. 1977. Visionaries and villains: the politics of designing interorganizational relations. Organization and Administrative Science, 8 (1): 23-40.

Andaleeb, Syed Saad. 1989. The strategic implications of trust for interorganizational exchange relations under asymmetric dependence. Ph.D. dissertation, University of Illinois at Urbana-Champaign.

Anderson, Erin. 1990. Two firms, one frontier: On assessing joint venture performance. Sloan Management Review, 31 (2): 19-30.

Anderson, Erin and Barton Weitz. 1992. The use of pledges to build and sustain commitment in distribution channels. Journal of Marketing Research, 29 (February): 18-34.

Anderson, Erin and Barton Weitz. 1989. Determinants of continuity in conventional industrial channel dyads. Marketing Science, 8 (4): 310-323.

Anderson, Erin and Hubert Gatignon. 1986. Modes of foreign entry: A transaction cost analysis and propositions. Journal of International Business Studies, 18 (3): 1-26.

Anderson James C. and James A. Narus. 1990. A model of distributor firm and manufacturer firm working partnerships. Journal of Marketing, 54 (January): 42-58.

Anderson, James C. and James A. Narus. 1984. A model of the distributor's perspective of distributor-manufacturer working relationships. Journal of Marketing, 48 (Fall): 62-74.

Arndt, Johan. 1979. Toward a concept of domesticated markets. Journal of Marketing, 43 (Fall): 69-75.

- Artisien, Patrick F.R. and Peter J. Buckley. 1985. Joint ventures in Yugoslavia: Opportunities and constraints. Journal of International Business Studies, 16 (1): 111-135.
- Awadzi, Winston K. 1987. Determinants of joint venture performance: A study of international joint ventures in the United States. Ph.D. dissertation, Louisiana State University.
- Axelrod, Robert. 1984. The evolution of cooperation. New York, NY: Basic Books.
- Baliga, B.R. and Alfred M. Jaeger. 1984. Multinational corporation: control systems and delegation issues. Journal of International Business Studies, 15 (2): 25-40.
- Ballou, Robert J. 1967. Joint ventures and Japan. Tokyo: Sophia University and C.E. Tuttle.
- Bannister, E. 1969. Sociodynamics: An integrative theory of power, authority, influence and love. American Sociological Review, 34: 374-393.
- Barclay, Donald W. 1991. Interdepartmental conflict in organizational buying: The impact of the organizational context. Journal of Marketing Research, 28 (May): 144-159.
- Barclay, Donald W. 1987. PLS modelling. Doctoral seminar handout, Western Business School, The University of Western Ontario.
- Barclay, Donald W. 1986. The impact of the organization context on conflict in organizational buying: A system view. Ph.D. dissertation, The University of Michigan.
- Barnard, Chester I. 1938. The functions of the executive. Cambridge, MA: Harvard University Press.
- Baron, Reuben M. and David A. Kenny. 1986. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology, 51 (6): 1173-1182.
- Bartlett, Christopher A. and Sumatra Ghoshal. 1989. Managing across borders - The transnational solution. Boston, MA: Harvard Business School Press.

Baughn, C. Christopher and Richard N. Osborn. 1990. The role of technology in the formation and form of multinational cooperative arrangements. The Journal of High Technology Management Research, 1 (2): 181-192.

Beamish, Paul W. 1993. The characteristics of joint ventures in the People's Republic of China. Journal of International Marketing, 1 (2): 29-49.

Beamish, Paul W. 1988. Multinational joint ventures in developing countries. London: Routledge.

Beamish, Paul W. 1987. Joint ventures in LDCs: Partner selection and performance. Management International Review, 27 (1): 23-37.

Beamish, Paul W. 1985. The characteristics of joint ventures in developed and developing countries. Columbia Journal of World Business, 20 (3): 13-19.

Beamish, Paul W. 1984. Joint venture performance in developing countries. Ph.D. dissertation, The University of Western Ontario.

Beamish, Paul W. and John C. Banks. 1987. Equity joint ventures and the theory of the multinational enterprise. Journal of International Business Studies, 18 (2): 1-16.

Becker, Howard S. 1960. Notes on the concept of commitment. American Journal of Sociology, 66 (3): 32-40.

Behrman, Jack. 1970. National interest and the multinational enterprise. New York, NY: Prentice-Hall.

Berg, Sanford G., Jerome Duncan and Philip Friedman. 1982. Joint venture strategies and corporate innovation. Cambridge, MA: Oelgeschlager, Gunn and Hain.

Bivens, Karen K. and E.B. Lowell. 1966. Joint ventures with foreign partners: International survey of business opinion and experience. New York, NY: National Industry Conference Board.

Blau, Peter. 1964. Exchange and power in social life. New York, NY: Wiley and Sons.

Block, Zenas and Hideo Matsumoto. 1972. Joint-venturing in Japan. The Conference Board Record, (April): 32-36.

- Blodgett, Linda L. 1992. Factors in the instability of international joint ventures. Strategic Management Journal, 13 (6): 475-481.
- Blodgett, Linda L. 1991. Partner contributions as predictors of equity share in international ventures. Journal of International Business Studies, 22 (1): 63-78.
- Blodgett, Linda L. 1987. A resource-based study of bargaining power in U.S.-foreign equity joint ventures. Ph.D. dissertation, The University of Michigan.
- Blumenthal, Judith F. 1988. Strategic and organizational conditions for joint venture formation and success. Ph.D. dissertation, University of Southern California.
- Bonoma, Thomas V. 1976. Conflict, cooperation and trust in three power systems. Behavioral Science, 21: 499-514.
- Brandt, William K. and James M. Hulbert. 1976. Patterns of communication in the multinational corporation: An empirical study. Journal of International Business Studies, 7 (1): 57-64.
- Brehm, Jack W. 1966. A theory of psychological reactance. New York, NY: Academic Press.
- Brewer, John and Albert Hunter. 1989. Multimethod research: A synthesis of styles. Newbury Park, CA: Sage.
- Bromiley, Philip and L.L. Cummings. 1992. Transaction costs in organizations with trust. Working paper, University of Minnesota.
- Brooke, Michael and H. Remmers. 1978. The strategy of multinational enterprise. London: Pitman.
- Brown, James R. and Ralph L. Day. 1981. Measures of manifest conflict in distribution channels. Journal of Marketing Research, 18 (August): 263-274.
- Buckley, Peter and Mark Casson. 1988. A theory of cooperation in international business. In F. Contractor and P. Lorange (eds.), Cooperative strategies in international business, 31-53. Toronto, ON: Lexington Books.
- Burgess, Robert L. and Ted L. Huston. 1983. Social exchange in developing relationships: An overview. In R. L. Burgess and T. L. Huston (eds.), Social exchange in developing relationships, 3-28. New York, NY: Academic Press.

Camerer, Colin. 1988. Gifts as economic signals and social symbols. In C. Winship and S. Rosen (eds.), Organizations and institutions: Sociological and economic approaches to the analysis of social structure, 180-214. Chicago, IL: University of Chicago Press.

Campbell, Donald T. and Donald W. Fiske. 1959. Convergent and discriminant validation by the multitrait-multimethod matrix. Psychological Bulletin, 56 (2): 81-105.

Campbell, Donald T. 1955. The informant in quantitative research. American Journal of Sociology, 60: 339-342.

Cantwell, John A. and John H. Dunning. 1984. The new forms of international involvement of British firms in the third world. Proceedings of the European International Business Association Conference.

Chi, Tailan. 1990. Transaction costs, modal choice, and the share structure of international collaborative ventures. Ph.D. dissertation, University of Washington.

Child, John. 1977. Organizations: A guide to problems and practice. New York, NY: Harper and Row.

Child, John. 1972. Organization structure and strategies of control: A replication of the Aston study. Administrative Science Quarterly, 17: 163-177.

Churchill, Gilbert A. Jr. 1979. A paradigm for developing better measures of marketing constructs. Journal of Marketing Research, 16 (February): 64-73.

Clover, Vernon T. and Howard L. Balsley. 1979. Business research methods. 2nd ed., Columbus, OH: Grid Publishing.

Cohen, Jacob. 1977. Statistical power analysis for the behavioral sciences. New York, NY: Academic Press.

Coleman, James S. 1990. Foundations of social theory. Cambridge, MA: Harvard University Press.

Contractor, Farok and Peter Lorange. 1988. The strategy and economics basis for cooperative venture. In F. Contractor and P. Lorange (eds.), Cooperative strategies in international business, 1-28. Toronto, ON: Lexington Books.

Cook, Karen S. 1977. Exchange and power in networks of interorganizational relations. The Sociological Quarterly, 18 (Winter): 62-82.

Cook, Karen S. and Richard M. Emerson. 1978. Power, equity and commitment in exchange networks. American Sociological Review, 43: 721-739.

Cook, Thomas D. and Donald T. Campbell. 1979. Quasi-experimentation: Design and analysis issues for field settings. Chicago, IL: Rand McNally.

Cray, David. 1984. Control and coordination in multinational corporations. Journal of International Business Studies, 15 (2): 85-98.

Cronbach, Lee J. 1951. Coefficient Alpha and the internal structure of tests. Psychometrics, 16: 297-334.

Cronbach, Lee J. and Paul E. Meehl. 1955. Construct validity in psychological tests. Psychological Bulletin, 52 (4): 281-302.

Crosby, Lawrence A., Kenneth R. Evans and Deborah Cowles. 1990. Relationship quality in service selling: An interpersonal influence perspective. Journal of Marketing, 54 (July): 68-81.

Dagusta, Partha. 1988. Trust as a commodity. In D. Gambetta (ed.), Trust: making and breaking cooperative relations, 49-72, New York, NY: Blackwell.

Dahl, Robert A. 1957. The concept of power. Behavioral Science, (July): 201-215.

Dang, Tran. 1977. Ownership, control and performance of the multinational corporation: A study of U.S. wholly-owned subsidiaries and joint ventures in the Philippines and Taiwan. Ph.D. dissertation, University of California, Los Angeles.

Daniels, John D., Ernest W. Ogram and Lee H. Radebaugh. 1983. International business: Environments and operations. 3rd ed., Reading, MA: Addison-Wesley.

Deloitte, Haskins and Sells International. 1989. Teaming up for the Nineties- Can you survive without a partner? New York, NY: Deloitte, Haskins and Sells.

Deutsch, Morton. 1973. The resolution of conflict. New Haven, CT: Yale University Press.

Deutsch, Morton. 1958. Trust and suspicion. Journal of Conflict Resolution, 2: 265-79.

Devlin, Godfrey and Mark Bleackley. 1988. Strategic alliances - Guidelines for success. Long Range Planning, 21 (5): 18-23.

- Dillman, Don A. 1978. Mail and telephone surveys: The total design method. New York, NY: Wiley and Sons.
- Dore, Ronald. 1983. Goodwill and the spirit of capitalism. British Journal of Sociology, 34: 459-482.
- Doz, Yves. 1986. Strategic management in multinational companies. Oxford: Pergamon Press.
- Doz, Yves and C.K. Prahalad. 1984. Patterns of strategic control within multinational corporations. Journal of International Business Studies, 15 (2): 55-72.
- Dwyer, F. Robert, Paul H. Schurr and Sejo Oh. 1987. Developing buyer-seller relations. Journal of Marketing, 51 (April): 11-28.
- Edstrom, Anders and Jay R. Galbraith. 1977. Transfer of managers as a coordination and control strategy in multinational organizations. Administrative Science Quarterly, 22: 248-263.
- Egelhoff, William G. 1984. Patterns of control in U.S., U.K. and European multinational corporations. Journal of International Business Studies, 15 (2): 73-84.
- Emerson, Richard M. 1962. Power-Dependence relations. American Sociological Review, 27: 37-40.
- Emory, C. William. 1980. Business research methods. Homewood, IL: Irwin.
- Etgar, Michael. 1979. Sources and types of intrachannel conflict. Journal of Retailing, 5 (Spring): 61-78.
- Etgar, Michael. 1978. Intrachannel conflict and use of power. Journal of Marketing Research, 15 (May): 263-274.
- Etzioni, Amitai. 1965. Organizational control structure. In J.G. March (ed.), Handbook of organization, 650-677. Chicago, IL: Rand MacNally.
- Fagre, Nathan and Louis T. Wells. 1982. Bargaining power of multinationals and host governments. Journal of International Business Studies, 13 (2): 9-24.
- Fisher, Ronald J. 1982. Social psychology. New York, NY: St. Martin's Press.

- Foa, Uriel and Edna Foa. 1974. Societal structures of the mind. Springfield, Ill.: Charles C. Thomas.
- Fowler, Floyd J. Jr. 1984. Survey research methods, Beverly Hills, CA: Sage.
- Franko, Lawrence G. 1971. Joint venture survival in multinational corporations. New York, NY: Praeger.
- Frayne, Colette, A. and J. Michael Geringer. Forthcoming. A social cognitive approach to examining joint venture general manager performance. Group and Organization Management.
- Frayne, Colette A. and J. Michael Geringer. 1993. Self-management training for joint venture general managers. Human Resource Planning, 15 (4): 69-86.
- Frazier, Gary L. and Raymond C. Rody. 1991. The use of influence strategies in interfirm relationships in industrial product channels. Journal of Marketing, 55 (January): 52-69.
- Frazier, Gary L. 1983. Interorganizational exchange behavior in marketing channels: A broadened perspective, Journal of Marketing, 47 (Fall): 68-78.
- Friedman, Wolfgang G. and Jean-Pierre Beguin. 1971. Joint international business ventures in developing countries. New York, NY: Columbia University Press.
- Friedman, Wolfgang G. and George Kalmanoff (eds.). 1961. Joint international business ventures. New York, NY: Columbia University Press.
- Gabarro, John J. 1987. The development of working relationships. In Jay Lorsch (ed.), Handbook of organizational behavior, 172-189, Englewood Cliffs, NJ: Prentice-Hall.
- Gabarro, John J. 1978. The development of trust, influence and expectations. In A. Athos and J. Gabarro (eds.), Interpersonal behavior, 290-303, Englewood Cliffs, NJ: Prentice-Hall.
- Gambetta, Diego. 1988. Can we trust trust? in D. Gambetta (ed.), Trust: Making and breaking cooperative relations, 213-238, New York, NY: Blackwell.
- Geringer, J. Michael. 1989. Parent strategy and division of control in international joint ventures. Proceedings of the ASAC Conference, Halifax, NS.

Geringer, J. Michael. 1988. Joint venture partner selection: Strategies for developed countries. Westport, CT: Quorum Books.

Geringer, J. Michael. 1986. Criteria for selecting partners for joint ventures in industrialized market economies. Ph.D. dissertation, University of Washington, Seattle.

Geringer, J. Michael and Colette A. Frayne. 1993. Self-efficacy, outcome expectancy and performance of international joint venture general managers. Canadian Journal of Administrative Sciences, 10 (4): 322-333

Geringer, J. Michael and Louis Hébert. 1992. Division of control and performance of international joint ventures. Working paper, Western Business School, The University of Western Ontario.

Geringer, J. Michael and Louis Hébert. 1991. Measuring joint venture performance. Journal of International Business Studies, 22 (2): 249-263.

Geringer, J. Michael and Louis Hébert. 1989. Control and performance of international joint ventures. Journal of International Business Studies, 20 (2): 235-254.

Geringer, J. Michael and C. Patrick Woodcock. 1989. Ownership and control of Canadian joint ventures. Business Quarterly, 54 (1): 97-101.

Gibb, Jack R. 1964. Climate for trust formation. In L.P. Bradford, J.R. Gibb and K.D. Benne (eds.), T-group and theory and laboratory method: Innovations in re-education, 279-309, New York, NY: Wiley and Sons.

Gladstein, Debra L.. 1984. Groups in context: A model of task group effectiveness. Administrative Science Quarterly, 29: 499-517.

Golembiewski, Robert T. and Mark McConkie. 1975. The centrality of interpersonal trust in group processes. In C.L. Cooper (ed.), Theories of Group Process, 131-185, New York, NY: Wiley and Sons.

Gomes-Casseres, Benjamin. 1987. Joint venture instability: Is it a problem? Columbia Journal of World Business, (Summer): 97-107.

Good, Loretta. 1972. United States joint ventures and manufacturing firms in Monterrey, Mexico: Comparative styles of management. Ph.D. dissertation, Cornell University.

- Gouldner, Alvin. 1959. Reciprocity and autonomy in functional theory. In L. Gross (ed.), Symposium on Sociological Theory, 241-270, New York, NY: Harper and Row.
- Granovetter, Mark. 1985. Economic action and social structure: A theory of embeddedness. American Journal of Sociology, 91 (3): 481-510.
- Gray, Barbara and Aimin Yan. 1992. A negotiations model of joint venture formation, structure and performance: Implications for global management. In S.B. Prasad (ed.), Advances in International Comparative Management, 7: 41-75, Greenwich, CT: JAI Press.
- Gray, Barbara. and L. Dave Brown. 1981. Conflict, power, and organization in a changing community. Human Relations, 34 (10): 877-893.
- Gullander, Stephen. 1976. Joint venture and corporate strategy. Columbia Journal of World Business, (Spring): 104-114.
- Gurr, Ted R. 1970. Why men rebel. Princeton, NJ: Princeton University Press.
- Habib, Ghazi M. 1987. Measures of manifest conflict in international joint ventures. Academy of Management Journal, 30 (4): 808-816.
- Habib, Ghazi M. 1983. Conflict measurement in the distribution channel of joint ventures: An empirical examination. Ph.D. dissertation, Texas Tech University.
- Hall, R. Duane. 1984. The international joint venture. New York, NY: Praeger.
- Hallén, Lars, Johanson, Jan and Nazeem Seyed-Mohamed. 1991. Interfirm adaptation in business relationships. Journal of Marketing, 55 (April): 29-37.
- Hamel, Gary. 1991. Competition for competence and inter-partner learning within international strategic alliances. Strategic Management Journal, 12 (Special issue): 83-103.
- Hamel, Gary, Yves Doz and C.K. Prahalad. 1989. Collaborate with your competitors - and win. Harvard Business Review, (January-February): 133-139.
- Hamilton, William F. 1985. Corporate strategies for managing emerging technologies. Technology in Society, 7: 197-212.
- Hannon, Michael T. 1971. Aggregation and disaggregation in sociology. Toronto, ON: Lexington Books.

- Hardy, Kenneth G. and Allan J. Magrath. 1988. Marketing channel management: Strategic planning and tactics. Glenview, IL: Scott, Foresman and Co.
- Harrigan, Kathryn R. 1988a. Joint ventures and competitive strategy. Strategic Management Journal, 9 (2): 141-158.
- Harrigan, Kathryn R. 1988b. Strategic alliances and partner asymmetries. In F. Contractor and P. Lorange (eds.), Cooperative strategies in international business, 205-26. Toronto, ON: Lexington Books.
- Harrigan, Kathryn R. 1987. Strategic alliances: Their new role in global competition. Columbia Journal of World Business, (Summer): 67-69.
- Harrigan, Kathryn R. 1986. Managing for joint venture success. Lexington, MA: Lexington Books.
- Harrigan, Kathryn R. 1985. Strategies for joint ventures. Lexington, MA: Lexington Books.
- Harrigan, Kathryn R. 1983. Research methodologies for contingency approaches to business strategy. Academy of Management Review, 8 (3): 398-405.
- Harrigan, Kathryn R. and William H. Newman. 1990. Bases of inter-organization cooperation: Propensity, power and persistence. Journal of Management Studies, 27 (4): 417-434.
- Harsanyi, John C. 1962. Measurement of social power, opportunity costs and the theory of two-person bargaining games. Behavioral Science, 7: 67-80.
- Hatfield, Elaine, Mary K. Utne and Jane Traupmann. 1979. Equity theory and intimate relationships. In R. Burgess and T. Huston (eds.), Social exchange in developing relationships, 99-133. New York, NY: Academic Press.
- Hébert, Louis and J. Michael Geringer. 1990. Measuring joint venture performance. Proceedings of the ASAC Conference, Whistler, BC.
- Hennart, Jean Francois. 1988. A transaction costs theory of equity joint venture. Strategic Management Journal, 9 (4): 361-74.
- Hill, Charles W.L. 1990. Cooperation, opportunism and the invisible hand: Implications for transaction cost theory. Academy of Management Review, 15 (3): 500-513.

Hill, Charles W.L., Peter Hwang and W. Chan Kim. 1990. An eclectic theory of the choice of international entry mode. Strategic Management Journal, 11 (2): 117-128.

Hill, Charles W.L. and W. Chan Kim. 1988. Searching for a dynamic theory of the multinational enterprise: A transaction cost model. Strategic Management Journal, 9 (2): 93-104.

Hill, Robert C. 1998. Joint venture strategy formulation and implementation: A contingency approach. Ph. D. dissertation, Texas A&M University.

Hirschman, Albert O. 1982. Rival interpretations of market society: Civilising, destructive or feeble? Journal of Economic Literature, 20: 1463-1484.

Hlavacek, James D. and V.A. Thompson. 1976. The joint-venture approach to technology utilization. IEEE Transactions on Engineering Management, 35-41.

Homans, George. 1961. Social behavior: Its elementary forms. New York, NY: Harcourt.

Inkpen, Andrew. 1992. Learning and collaboration: An examination of North American-Japanese joint ventures. Ph.D. dissertation, The University of Western Ontario.

Jaeger, Alfred M. 1982. Contrasting control modes in the multinational corporation: Theory, practice and implications. International Studies of Management and Organization, 12 (1): 59-82.

Jarillo, Jose-Carlos. 1988. On strategic networks. Strategic Management Journal, 9 (1): 31-41.

Janger, Allen R. 1980. Organization of international joint venture. New York, NY: Conference Board.

Johanson, Jan and Lars-Gunnar Mattsson. 1987. Interorganizational relations in industrial systems: A network approach compared with the transaction-cost approach. International Studies of Management and Organization, 17 (1): 34-48.

John, George and Torger Reve. 1982. The reliability and validity of key informant data from dyadic relationships in marketing channels. Journal of Marketing Research, 19 (November): 517-24.

Jones, Gareth R. 1987. Organization-client transactions and organizational governance structures. Academy of Management Journal, 30 (2): 197-218.

Jones, Gareth R. and Charles W. L. Hill. 1988. Transaction cost analysis of strategy-structure choice. Strategic Management Journal, 9 (2): 159-172.

Katz, Daniel and Robert L. Kahn. 1978. The social psychology of organizations. New York, NY: Wiley and Sons.

Kavanagh, Michael J., Arthur C. MacKinney and Leroy Wolins. 1971. Issues in managerial performance: Multitrait-multimethod analyses of ratings. Psychological Bulletin, 75 (1): 34-99.

Kerlinger, Fred N. 1973. Foundations of behavioral research. 2nd ed., New York, NY: Holt, Rinehart and Winston.

Kelley, Harold H. and John W. Thibaut. 1978. Interpersonal relations: A theory of interdependence. New York, NY: Wiley and Sons.

Kidder, Louise H. and Charles M. Judd. 1986. Research methods in social relations. 5th ed., New York, NY: Holt, Rinehart and Winston.

Killing, J. Peter. 1988. Understanding alliances: The role of task and organizational complexity. In F. Contractor and P. Lorange (eds.), Cooperative strategies in international business, 55-68. Toronto, ON: Lexington Books.

Killing, J. Peter. 1983. Strategies for joint venture success. New York, NY: Praeger.

Killing, J. Peter. 1982. How to make a global joint venture work. Harvard Business Review, (May-June): 120-127.

Kogut, Bruce. 1989. The stability of joint ventures: Reciprocity and competitive rivalry. The Journal of Industrial Economics, 38 (2): 183-198.

Kogut, Bruce. 1988a. A study of life cycle of joint ventures. In F. Contractor and P. Lorange (eds.), Cooperative strategies in international business, 169-185. Toronto, ON: Lexington Books.

Kogut, Bruce. 1988b. Joint ventures: Theoretical and empirical perspectives. Strategic Management Journal, 9 (4): 319-332.

Koh, Jeongsuk and N. Venkatraman. 1991. Joint venture formations and stock market reactions: An assessment in the information technology sector. Academy of Management Journal, 34 (4): 869-892.

- Korpi, William. 1974. Conflict and the balance of power. Acta Sociologica, 17 (2): 99-114.
- Larson, Andrea L. 1988. Cooperative alliances: A study of entrepreneurship. D.B.A. dissertation, Harvard University.
- Lecraw, Donald J. 1984. Bargaining power, ownership, and profitability of transnational corporations in developing countries. Journal of International Business Studies, 15 (1): 27-43.
- Levine, Sol and Paul E. White. 1961. Exchange as a conceptual framework for the study of interorganizational relationships. Administrative Science Quarterly, 5: 583-601.
- Levinthal, Daniel A. and Mark Fichman. 1988. Dynamics of inter-organizational attachments: Auditor-client relationships. Administrative Science Quarterly, 33: 345-369.
- Lorange, Peter and Johan Roos. 1990. Formation of cooperative ventures: Competence mix of the management teams. Management International Review, 30 (Special issue): 69-86.
- Lorange, Peter, M.F. Scott Morton and Sumantra Ghoshal. 1986. Strategic control. St Paul, MN: West.
- Lorange, Peter and M.F. Scott Morton. 1974. A framework for management control systems. Sloan Management Review, (Fall): 41-56.
- Lorenz, Edward H. 1988. Neither friends nor strangers: Informal networks of subcontracting in French industry. In D. Gambetta (ed.), Trust: Making and breaking cooperative relations, 194-210, New York, NY: Blackwell.
- Lusch, Robert F. 1976. Sources of power: their impact on intrachannel conflict. Journal of Marketing Research, 13 (November): 382-390.
- Lynch, Richard P. 1989. The practical guide to joint ventures and alliances. New York, NY: Wiley and Sons.
- Macaulay, Stewart. 1963. Non-contractual relations in business. American Sociological Review, 28: 55-70.
- Maitland, Ian, John Bryson and Andrew H. Van de Ven. 1985. Sociologists, economists and opportunism. Academy of Management Review, 10 (1): 59-65.

- March, James C. and Herbert A. Simon. 1958. Organizations. New York, NY: Wiley and Sons.
- Masters, James R. 1974. The relationship between number of response categories and reliability of Likert-type questionnaires. Journal of Educational Measurement, 11: 49-53.
- Mayo, Elton. 1945. The social problem of an industrial civilization. Cambridge, MA: Harvard University.
- McManus, John C. 1975. The costs of alternative economic organizations. Canadian Journal of Economics, 8: 334-350.
- McNemar, Quinn. 1969. Psychological statistics. 4th ed., New York, NY: Wiley and Sons.
- Mintzberg, Henry. 1979. The structuring of organization. New York, NY: Prentice-Hall.
- Monteverde, Kirk and David J. Teece. 1982. Appropriable rents and quasi-vertical integration. Journal of Law and Economics, 25: 321-328.
- Mueller, Willard F. 1970. A primer on monopoly and competition. New York, NY: Random House.
- Nisbett, Richard and Timothy Wilson. 1977. Telling more than we can know: Verbal reports on mental processes. Psychological Review, 84 (May): 239-259.
- Nunnally, Jum C. 1967. Psychometric theory. New York, NY: McGraw Hill.
- Ohmae, Kenichi. 1989. The global logic of strategic alliances. Harvard Business Review, (March-April): 143-154.
- Oliver, Richard L. and John E. Swan. 1989. Consumer perceptions of interpersonal equity and satisfaction in transactions: A field survey approach. Journal of Marketing, 53 (April): 21-35.
- Osborn, Richard N. and C. Christopher Baughn. 1990. Forms of international governance for multinational alliances. Academy of Management Journal, 33 (3): 503-519.
- Ouchi, William G. 1980. Markets, bureaucracies and clans. Administrative Science Quarterly, 25: 129-141.

- Ouchi, William G. 1978. The transmission of control through organizational hierarchy. Academy of Management Journal, 21 (2): 173-192.
- Ouchi, William G. 1977. The relationship between organizational structure and organizational control. Administrative Science Quarterly, 22: 92-112.
- Ouchi, William G. and Michele K. Bolton. 1988. The logic of joint research and development. California Management Review, 30 (2): 9-33.
- Ouchi, William G. and Mary Ann Maguire. 1975. Organizational control: Two functions. Administrative Science Quarterly, 20: 559-569.
- Parkhe, Arvind. 1993. "Messy" research, methodological predispositions, and theory development in international joint ventures. Academy of Management Review, 18 (2): 227-268.
- Parkhe, Arvind. 1992. Interfirm strategic alliances: Empirical test of a game-theoretic model. Ph.D. dissertation, Temple University.
- Pearce, John, II, D. Keith Robbins and Richard D. Robinson Jr. 1987. The impact of grand strategy and planning formality on financial performance. Strategic Management Journal, 8 (2): 125-134.
- Perrow, Charles. 1986. Complex organizations. A critical essay. 3rd ed., Glenway, IL: Scott, Foresman and Co.
- Peter, J. Paul. 1981. Construct validity: A review of basic issues and marketing practices. Journal of Marketing Research, 18 (May): 133-145.
- Peterson, Richard B. and Justin Y. Shimada. 1978. Sources of management problems in Japanese-American joint ventures. Academy of Management Review, 3 (4): 796-804.
- Peterson, Richard B. and Hermann F. Schwind. 1977. A comparative study of personnel problems in international companies and joint ventures in Japan. Journal of International Business Studies, 8 (1): 45-55.
- Pfeffer, Jeffrey and Gerald R. Salancik. 1978. The external control of organizations. New York, NY: Harper and Row.
- Pfeffer, Jeffrey and Phillip Nowak. 1976. Joint venture and interorganizational interdependence. Administrative Science Quarterly, 21: 398-418.

Phillips, Lynn W. 1981. Assessing measurement error in key informant reports: A methodological note on organizational analysis in marketing. Journal of Marketing Research, 18 (November): 395-415.

Phillips, Lynn W. 1980. The study of collective behavior in Marketing: Methodological issues in the use of key informants. Ph.D. dissertation, Northwestern University.

Pondy, Louis R. 1967. Organizational conflict: Concepts and models. Administrative Science Quarterly, 12: 296-320.

Porter, Michael E. 1985. Competitive advantage. New York, NY: The Free Press.

Porter, Michael E. and M.B. Fuller. 1986. Coalitions and global strategy. In M.E. Porter (ed.), Competition in global industries, 315-344. Boston, MA: Harvard Business School Press.

Provan, Keith G. and Steven J. Skinner. 1989. Interorganizational dependence and control as predictors of opportunism in dealer-supplier relations. Academy of Management Journal, 32 (1): 202-212.

Pruit, Dean G. 1981. Negotiation behavior. New York, NY: Academy Press.

Rafii, Farshad. 1978. Joint ventures and transfer of technology to Iran: The impact of foreign control. D.B.A. dissertation, Harvard University.

Raveed, Sion. 1976. Joint ventures between U.S. multinational firms and host governments in selected developing countries: A case study of Costa Rica, Trinidad and Venezuela. D.B.A. dissertation, Indiana University.

Reich, Robert B. and E.D. Mankin. 1986. Joint ventures with Japan give away our future. Harvard Business Review, (March-April): 78-86.

Renforth, William. 1974. A comparative study of joint international business ventures with family firms or non-family partners: The Caribbean community. D.B.A. dissertation, Indiana University.

Reve, Torger and Louis W. Stern. 1979. Interorganizational relations in marketing channels. Academy of Management Review, 4 (3): 405-416.

Reynolds, John I. 1984. The "Pinched Shoe" effect of international joint venture. Columbia Journal of World Business. (Summer): 23-29.

- Roberts, Edward B. and Robert Mizouchi. 1989. Inter-firm technological collaboration: The case of Japanese technology. International Journal of Technology Management, 4 (1): 43-61.
- Robicheaux, Robert A. and Adel I. El-Ansary. 1975. A general model for understanding channel member behavior. Journal of Retailing, 52 (Spring): 13-30.
- Roering, Kenneth J. 1977. Bargaining in distribution channels. Journal of Business Research, 5 (March): 15-26.
- Roos, Johan. 1989. Cooperative venture formation processes: Characteristics and impact on performance. Doctoral dissertation, Institute of International Business, Stockholm School of Economics, Sweden.
- Rosenbloom, Richard S. and Michael A. Cusumano. 1987. Technological pioneering and competitive advantage: The birth of the VCR industry. California Management Review, 60 (1): 115-123.
- Rubin, Jeffrey Z. and Bert R. Brown. 1975. The social psychology of bargaining and negotiation. New York, NY: Academic Press.
- Rugman, Alan M. 1985. Internalization is still a general theory of foreign direct investment. Weltwirtschaftliches Archiv, (September): 570-575.
- Rusbult, Caryl E. 1980. Commitment and satisfaction in romantic associations: A test of the investment model. Journal of Experimental Social Psychology, 16: 172-186.
- Salancik, Gerald R. 1977. Commitment and the control of organizational behavior and belief. In B.M. Staw and G.R. Salancik (eds.), New directions in organizational behavior, 1-54, Chicago, IL: St. Clair Press.
- Sawyer, Alan G. and A. Dwayne Ball. 1981. Statistical power and effect size in marketing research. Journal of Marketing 18 (August): 275-290.
- Scanzoni, John. 1979. Social exchange and behavioral interdependence. In R. Burgess and T. Huston (eds.), Social exchange in developing relationships, 61-98, New York, NY: Academic Press.
- Schaan, Jean-Louis. 1983. Parent control and joint venture success: The case of Mexico. Ph.D. dissertation, The University of Western Ontario.

- Schaan, Jean-Louis and Paul W. Beamish. 1988. Joint venture general managers in LDCs. In F. Contractor and P. Lorange (eds.), Cooperative strategies in international business, 279-299. Toronto, ON: Lexington Books.
- Schmidt, Stuart M. and Thomas A. Kochan. 1977. Interorganizational relationships: patterns and motivations. Administrative Science Quarterly, 22: 220-234.
- Schopler, John. 1965. Social power. In L. Berkowitz (ed.), Advances in Experimental Social Psychology, 2: 177-218, New York, NY: Academic Press.
- Schelling, Thomas. 1960. The strategy of conflict. Cambridge, MA: Harvard University Press.
- Seabright, Mark A., Daniel A. Levinthal and Mark Fichman. 1992. Role of individual attachments in the dissolution of inter-organizational relationships. Academy of Management Journal, 35 (1): 122-160.
- Seidler, Jerzy. 1974. On using informants: A technique for collecting quantitative data and controlling for measurement error in organization analysis. American Sociological Review, 39: 816-831.
- Shaver, Kelly J. 1987. Principles of social psychology. 3rd. ed., Hillsdale, NJ: Lawrence Erlbaum Associates.
- Shaw, Marvin E. 1981. Group dynamics. New York, NY: McGraw Hill.
- Shrout, Patrick E. and Joseph L. Fleiss. 1979. Intraclass correlations: Uses in assessing rater reliability. Psychological Bulletin, 86 (2): 420-428.
- Siegel, Sidney and N. John Castellan Jr. 1988. Non-parametric statistics for the behavioral sciences. 2nd ed., New York, NY: McGraw Hill.
- Simiar, Farhad. 1982. Major causes of joint venture failure in the Middle East: The case of Iran. Management International Review, 23 (1): 58-68.
- Skinner, Wickam. 1968. American industry in developing countries. New York, NY: Wiley and Sons.
- Smith, J. Brock. 1992. Horizontal selling alliances: The effect of organizational distance and mutual trust on dyadic working relationships. Ph.D. dissertation, The University of Western Ontario.

Snyder, Glenn H. and P. Diesing. 1977. Conflict among nations. Princeton, NJ: Princeton University Press.

Solomon, Leonard. 1960. The influence of some types of power relationships and game strategies upon the development of interpersonal trust. Journal of Abnormal and Social Psychology, 61 (2): 223-230.

Staw, Barry M. 1975. Attribution of the "Causes" of performance: A general alternative interpretation of cross-sectional research on organizations. Organizational Behavior and Human Performance, 13: 414-432.

Stern, Louis W. and Torger Reve. 1980. Distribution channels as political economies: A framework for comparative analysis. Journal of Marketing, 44 (Summer): 52-64.

Stopford, John M. and Louis T. Wells. 1972. Managing the multinational enterprise. New York, NY: Basic Books.

Stuckey, John A. 1983. Vertical integration and joint ventures in the aluminium industry. Cambridge, MA: Harvard University Press.

Subieta, Aldo T. 1991. Effective formation of international cooperative arrangements: Technology joint ventures and licensing agreements. Ph.D. dissertation, Michigan State University.

Sullivan, Jeremiah and Richard B. Peterson. 1982. Factors associated with trust in Japanese-American joint ventures. Management International Review, 22 (2): 31-40.

Sullivan, Jeremiah, Richard B. Peterson, Naoki Kameda and Justin Shimada. 1981. The relationship between conflict resolution approaches and trust - A cross-cultural study. Academy of Management Journal, 24 (4): 803-815.

Tannebaum, Arnold S. 1968. Control in organization. New York, NY: McGraw Hill.

Teece, David J. 1988. Capturing value from technological innovation: Integration, strategic partnering, and licensing decisions. Interfaces, 18 (3): 46-61.

Teece, David J. 1981. The market for know-how and the efficient international transfer of technology. Annals of the American Academy of Political and Social Science, 458 (November): 81-96.

- Thibaut, John W. and Harold H. Kelley. 1959. The social psychology of groups. New York, NY: Wiley and Sons.
- Thomas, Kenneth. 1976. Conflict and conflict management. In M. Dunnette (ed.), Handbook of industrial and organizational psychology, 889-935, Chicago, IL: Rand McNally.
- Thompson, James D. 1967. Organizations in action. New York, NY: McGraw Hill.
- Thompson, Linda and Alexis J. Walker. 1982. The dyad as the unit of analysis: Conceptual and methodological issues. Journal of Marriage and the Family, (November): 889-900.
- Tillman, Areerat U. 1990. The influence of control and conflict on performance of Japanese-Thai joint ventures. D.B.A. dissertation, Nova University.
- Tjosvold, Dean. 1984. Cooperation theory and organization. Human Relations, 37 (9): 743-767.
- Tomlinson, James W. C. and M. Thompson. 1977. A study of Canadian joint ventures in Mexico. Working paper, College of Commerce and Business Administration, University of British Columbia.
- Tomlinson, James W.C. 1970. The joint venture process in international business: India and Pakistan. Cambridge, MA: MIT Press.
- Toyne, Brian. 1989. International exchange: A foundation for theory building in international business. Journal of International Business Studies, 20 (2): 1-18.
- Tuite, Matthew. 1972. Toward a theory of joint decision making. In M. Tuite, R. Chisholm and M. Radnor (eds.), Interorganizational decision making, 9-19, Chicago, IL: Aldine.
- Van de Ven, Andrew H. 1976. On the nature, formation and maintenance of relations among organizations. Academy of Management Review, 1 (4): 24-36.
- Van de Ven, Andrew H. and Gordon Walker. 1984. The dynamics of interorganizational coordination. Administrative Science Quarterly, 29. 598-621.
- Vancil, Richard F. 1979. Decentralization: Managing ambiguity by design. Homewood, IL: Irwin.

Vernon, Raymond. 1983. Organizational and institutional responses to international risk. In R.G. Herring (ed.), Managing international risk, 191-216, Cambridge: Cambridge University Press.

Walton, Richard E. 1969. Interpersonal peacemaking: Confrontations and third party consultation. Reading, MA: Addison-Wesley.

Warwick, Donald P. and Charles A. Lininger. 1975. The sample survey: Theory and practice. New York, NY: McGraw Hill.

West, Malcolm W. 1959. Thinking ahead: The jointly-owned subsidiary. Harvard Business Review, (July-August): 31-32.

Westbrook, Robert A. and Richard L. Oliver. 1981. Developing better measures of consumer satisfaction: Some preliminary results. In K. Monroe (ed.), Advances in consumer research, 8: 94-99, Ann Arbor, MI: Association for consumer research.

Whetten, David A. 1987. Interorganizational relations. In Lorsch, Jay (ed.), Handbook of organizational behavior, 172-189, Englewood Cliffs, NJ: Prentice-Hall.

Wilkins, Alan L. and William G. Ouchi. 1983. Efficient cultures: The relationship between culture and organizational performance. Administrative Science Quarterly, 32: 468-481.

Wilkinson, Ian F. 1979. Power and satisfaction in channels of distribution. Journal of Retailing, 55 (Summer): 79-94.

Wilkinson, Ian F. and D. Kipnis. 1978. Interfirm use of power. Journal of Applied Science, 63 (3): 315-20.

Williamson, Oliver E. 1985. The economic institutions of capitalism: Firms, markets, relational contracting. New York, NY: The Free Press.

Williamson, Oliver E. 1983. Credible commitments: Using hostages to support exchange. American Economic Review, 73: 519-540.

Williamson, Oliver E. 1981. The economics of organization: The transaction cost approach. American Journal of Sociology, 87 (3). 548-577.

Williamson, Oliver E. 1975: Markets and hierarchies: Analysis and antitrust implications. New York, NY: The Free Press.

Williamson, Oliver E. and William G. Ouchi. 1981. The markets and hierarchies program of research: Origins, implications, prospects. In A. Van de Ven and W.F. Joyce (eds.), Perspectives on organizational design and behavior, 347-370, New York, NY: Wiley and Sons.

Woodcock, C. Patrick and J. Michael Geringer. 1990. Parent strategy, ownership structure, cultural congruity and joint venture performance. Proceedings of the ASAC Conference, Whistler, BC.

World Bank. 1989. World development report 1989. New York, NY: Oxford University Press.

Wright, Richard. 1977. Canadian joint ventures in Japan. The Business Quarterly, (Autumn): 42-53.

Young, Louise C. and Ian F. Wilkinson. 1988. The role of trust and co-operation in marketing channels: A preliminary study. European Journal of Marketing, 23 (2): 109-122.

Zeira, Yoram and Oded Shenkar. 1990. Interactive and specific parent characteristics: Implications for management and human resources in international joint ventures. Management International Review, 30 (Special issue): 7-22.

Zucker, Lynne G. 1986. Production of trust: Institutional sources of economic structure, 1840-1920. In B.M. Staw and L.L. Cummings (eds.), Research in Organizational Behavior, 8: 53-111, Greenwich, CT: JAI Press.