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**A STUDY OF GOVERNMENT-BUSINESS PARTNERSHIPS
IN THE AEROSPACE/ DEFENCE ELECTRONICS INDUSTRY**

by

ERIC J. DARLING, B. COMM. (HONOURS)

*A thesis submitted to the Faculty of Graduate
Studies and Research in partial fulfilment
of the requirements for the degree of*

MASTER OF MANAGEMENT STUDIES

School of Business
Carleton University
Ottawa, Ontario

February 16, 1990

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Studies and Research acceptance of the thesis

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submitted by Eric J. Darling, B. Comm. (Honours) in partial
fulfilment of the requirements for the degree of
Master of Management Studies.

A handwritten signature in black ink, appearing to read "G. H. Allen", is written over a horizontal line.

Thesis Supervisor

A handwritten signature in black ink, appearing to read "James C. H. H. H.", is written over a horizontal line.

Director, School of Business

February 19, 1990

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ABSTRACT

The Government of Canada, through the Department of Industry, Science and Technology, has recently introduced an innovative instrument called the "Memorandum of Understanding". Memoranda of Understanding (MOU's) are long-term strategic agreements between the federal government and selected companies in the aerospace/defence electronics industry. These agreements establish the parameters for federal government contributions to a firm.

Memoranda of Understanding have helped define what has been termed "government-business partnerships". The research examines government-business partnerships under MOU's in the context of the strategic partnership model. Results provide evidence to suggest that government-business partnerships (under MOU's) correspond to the strategic partnership model along each of the model's dimensions. These dimensions are first, the attributes of a strategic partnership; second, reasons for entering into the relationship; and third, control mechanisms of the agreement.

In light of the evidence, government-business partnerships can now be thought of in a new way, that is, as a new form of strategic partnership.

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I am also grateful for the support and encouragement that I received from my family. In particular, thanks to my parents and to Rence.

STATEMENT OF CONFIDENTIALITY

Due to the nature of information gathered during the research, respondents' names and company names are not disclosed in association with specific responses.

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CHAPTER 1

INTRODUCTION

Canada, like other countries, must strengthen the scientific and technological base of its industry in order to improve its competitiveness in world markets.

Speech by R.V. Hession, Deputy Minister of the Department of Regional Industrial Expansion, to the Canadian Advanced Technology Association, Ottawa, April 1987.

In recent years, the declining international competitiveness of Canadian firms has become a prime concern for the Government of Canada, and in particular for the Department of Industry, Science and Technology (ISTC). As a result, ISTC has brought to bear a full range of resources, including funded and non-funded programs, in an effort to counter this decline (Proceedings from CATA Conference, 1987). New policy directions in government have allowed ISTC to "redefine its role and become even more active in the areas of investment promotion, export marketing, innovation and technology transfer" (Annual Report 1987).

One strategy pursued by ISTC to improve international competitiveness has been to provide financial assistance to innovative Canadian companies whose R&D efforts are market-driven. Financial assistance in the form of grants and repayable contributions stem from programs administered by ISTC, such as the Technology Outreach Program (TOP) and the Defence Industry Productivity Program (DIPP).

A more recent strategy adopted by ISTC has been to support the formation of strategic partnerships. These partnerships unite organizations involved in technology development. Various combinations of private sector and University R&D centres, manufacturing companies and marketing firms are brought together in strategic

partnerships. ISTC has inaugurated several programs to encourage strategic partnerships, including the Technology Opportunities in Europe Program (TOEP) which assists and coordinates Canadian participation in alliances with European companies.

In 1983, the Department of Regional Industrial Expansion (the predecessor department to ISTC) introduced an innovation which appears to have elements of both the "financial contribution" and "strategic partnership" program strategies. This innovation is the Memorandum of Understanding (MOU), that is, a long-term strategic agreement signed between the federal government and an individual company (see Appendix A). Like the "financial contribution" strategy, the MOU outlines the parameters for government financial contributions to a company; like the "strategic partnership" strategy, the MOU provides the framework for a long-term partnership between the federal government and the firm.

In the 1987 annual report of the Department of Regional Industrial Expansion, the federal government recognized the existence of this new type of partnership between the federal government and the firm,

The establishment of strong communications links with industry has led to the signing of several Memoranda of Understanding (MOU's) with firms and industry groups. These provide essential keys in defining government-business partnerships and provide a framework for co-operative action on a long-term basis.

DRIE Annual Report, 1987

While empirical research has been performed in the area of government financial assistance to business (1), and on the nature of strategic partnerships, no published research has focused on what has been termed "government-business partnerships". This thesis explores the nature of government-business partnerships under Memoranda of Understanding. These partnerships are deserving of investigation in light of their importance to the international competitiveness of Canadian firms in the aerospace/defence electronics industry.

(1) Research in the area of government financial assistance focuses on 1) the macroeconomic effects of government incentive programs (Binhammer, McDonough and Lepore, 1983; Sharwood, 1976; Woodward, 1975), 2) individual firm reaction to various investment assistance programs (Ernst and Whinney, 1980, Legoff and Rosenfeld, 1980) and 3) the impact of government policies, including direct funding, on corporate technology development (Crow, 1988).

CHAPTER 2

RESEARCH PROBLEM

The purpose of this thesis is to explore the nature of government-business partnerships under MOU's using strategic partnership theory as a model. This approach is supported by the fact that similarities exist between government-business partnerships under MOU's and strategic partnerships described in the literature: both types of partnerships have strategic objectives and a long-term agreement; both also involve the exchange of resources and the sharing of benefits between partners. The research problem is therefore defined as follows:

Does the government-business partnership under the MOU correspond to the strategic partnership model ?

CHAPTER 3

LITERATURE REVIEW

The literature review will focus on the dimensions which have enabled researchers to define the nature of strategic partnerships. When brought together, these dimensions form a comprehensive model of the strategic partnership. The model will be employed in this study to explore the nature of a new type of partnership, the government-business partnership.

The dimensions discussed in the literature are first, the attributes of a strategic partnership; second, the reasons for entering into the relationship; and third, the control mechanisms of the agreement. Each of these dimensions will be presented. The literature review will begin however with a summary of the definitions of a strategic partnership.

Definitions of a Strategic Partnership

As Mytelka (1987, 9) points out, there is, as yet no single generally accepted definition of a strategic partnership. She defines the strategic partnership as "a long-term agreement among firms designed to deal with the uncertainties of technological change". For their part, Hull and Slowinski (1988a, 1) define the strategic partnership as "an inter-organizational relationship that pools the talents and resources of two firms and focuses them on a project". In another definition, differences in partner size is emphasized : "...it is a powerful vehicle to link and marry complementary strengths of large and small companies" (Herther, 1986, 130). Roberts (1986) puts forth the

following list of synonyms for the term: new style joint-venture, direct strategic co-investment, corporate coalition and corporate collaboration.

It would seem that differences of opinion as to what constitutes a strategic partnership are centred around the question of the structure of the arrangement. For example, Hull and Slowinski (1988a, 10) argue that joint-ventures and acquisitions are different from strategic partnerships, whereas Venture Economics' (1986, 4) include them in their definition of a strategic partnership. Though these differences of opinion may persist, there is nonetheless consensus in the literature that in order for an arrangement to be called a "strategic partnership", it must be strategic in nature. As such, the strategic partnership is "...a central aspect of a company's future direction, and is specifically concerned with securing, maintaining or enhancing a company's competitive advantage" (Devlin and Bleackley, 1988).

Attributes of a Strategic Partnership

The literature identifies key attributes of a strategic partnership. This section discusses each of these attributes as follows: the presence of strategic objectives, the long-term nature of the agreement, the exchange of complementary resources, collaboration in decision-making, and a champion for the partnership in each organization.

Explicitly stated and well-defined strategic objectives are present in most strategic partnerships (Competitive Alliances, 1987). The very decision to engage in a partnership and the choice of a partner are both functions of the strategic objectives (Mytelka, 11). Van de Ven (1976) describes partner behaviour aimed at collective and self-interest goals as one of the basic characteristics of inter-organizational

relationships. Doz (1988, 319) observes that a minimum set of operational goals are needed for partnerships to succeed. Doz further suggests that relatively early on in the process of cooperation, the purposes of the two partners (at least in the restricted area of the partnership) are made to converge, though this may be difficult to achieve because of cultural distance and hidden agendas. The term "strategic objective" is interpreted here along the lines of Devlin and Bleackley's definition, to mean those objectives which focus on the future direction of the company and which aim at enhancing the company's competitive position.

The second attribute of a strategic partnership is the long-term nature of the agreement. In a study of eight hundred and ninety five strategic alliances competing in twenty-three industries in the United States during the years 1974-1985, Harrigan (1986) found that the average duration of all ventures was three and a half years, and that half of those alliances assessed to be mutually successful lasted at least four years (1). Mytelka (1987, 11) emphasizes the long duration of strategic alliances "...strategic partnerships imply longer term considerations than those behind other types of ventures concerned with short term profits".

Third, a strategic partnership is characterized by the exchange of complementary resources. Partners offer complementary products, facilities, skills and technologies (Competitive Alliances, 1987). In a survey of entrepreneurial firms who entered into strategic partnerships with large firms, Hull and Slowinski (1988, 201) found that each partner brought a bundle of complementary resources to the partnership beyond

(1) Forty-two percent of the ventures lasted more than four years, 86 percent of them lasted less than 10 years, and 2.6 percent of them lasted 20 years or more.

financing, including technology, marketing, manufacturing capability, and management skills. Doz (1988, 318) performed exploratory research on selected strategic partnerships and concluded that complementary assets brought to the partnership were generally obvious at the start or even prior to negotiations.

The fourth attribute, collaboration in decision-making, refers to shared influence by partners in various areas of activity (Hull and Slowinski, 1988, 206). Hull and Slowinski reason that shared influence is an appropriate measure of collaboration because those partners who attribute a lot of influence to the other, as well as to themselves, are likely to be highly collaborative. In their study, they observed collaboration in decision-making between large and small firms in each of the following areas: financing, technology, manufacturing, marketing and management. From the same study, Hull and Slowinski found a significantly positive correlation between the degree of shared influence and the degree of perceived effectiveness of the partnership. They further suggested that the smaller firm should have majority influence in decision-making and the larger firm should have a strong minority influence.

Though shared influence is the focus of our attention in the area of decision-making, it should be noted that the decision-making processes of public and private organizations are not necessarily the same. The literature on public/private organizations suggests that public organizations use more decision criteria, more levels of review, and less individual autonomy and flexibility in decision-making than do private organizations (Rainey, 1976). Decisions of public organizations are also more greatly influenced by external sources such as public opinion and interest group reactions.

The final attribute is the presence of a champion for the partnership in each of the partner organizations, who serves as a "gate keeper" for the partnership (Hull and Slowinski 1988a, Doz 1988). The role of the champion is to coordinate or "broker" relationships between the partner and different functions of the champion's own organization, as the partnership's product moves downstream from R&D towards commercialization (Hull and Slowinski, 1988, 13). A champion is also an advocate for the partnership within his or her own organization.

Principal liaisons (also known as interface managers), who may perceive themselves as champions, often have entrepreneurial characteristics including a high degree of personal risk-taking and the ability to assimilate ways of doing things from their partner (Doz, 1988, 335). In many cases, these individuals are adopted by the partner organization (Doz, 1988, 335).

Frequent communications between principal liaisons, and between other members of each organization, is associated with the effectiveness of the partnership. Hull and Slowinski (1988) found that the greater the frequency of cross-communication, the more highly effective a partnership was rated. They also found that frequency of communications was related to effectiveness in cross-disciplinary contacts. In summary then, the literature suggests that a strategic partnership exhibits certain attributes which help to define it. This list of attributes may not be exhaustive, since empirical research in this area is quite recent and not necessarily complete. The purpose of identifying these key attributes has been to provide a basis from which the attributes of the government-business partnership can further be explored.

Reasons for Entering into a Strategic Partnership

Empirical research directed at the reasons for strategic partnering is extensive. Venture Economics (1986), in a survey sample of one hundred and thirty five Canadian companies involved in strategic partnerships, found that interest in corporate partnering was being driven by the need for related diversification and the desire for new product line additions. Overall results were as follows: related diversification in 73% of cases; unrelated diversification 10%; product line additions 57%; access to advanced technology 40%; internal new venture program 18%; other interest 2%; and no stated interest 7%.

Maritz and Smiley (1983) tested seventy cooperative agreements for various reasons for partnering: technological complementarity, technology transfer, marketing agreements, risk sharing and economies of scale. It was found that the two technology-related motivations were present in 70% of the total number of firms: Technological complementarity (long-term transactions involving an exchange or sharing of technology between the parties) was the most frequent, at 41%, while technology transfer (a one way flow of information generally in the form of a licence) added 29%. Securing "economies of scale" was a factor in the case of every joint venture and bidding consortium considered. This motive was highly significant since joint ventures made up 55% of the agreements in this study, and bidding consortia another 29%.

Hull and Slowinski (1988) studied the motivations for partnering between large and small firms. They found that small firms placed more importance on financing and marketing as reasons for partnering; whereas large firms were more interested in access to technology. As reasons for partnering, access to manufacturing capability and management skills were equally as important to large and small firms.

Herther (1986) also studied the motivations of large and small companies entering into strategic partnerships, with a specific focus on the defense-electronics industry. The methodology involved interviews with executives involved in strategic partnerships. Herther found that the small firm sought many benefits from the partnership, including an infusion of cash to fund development, immediate credibility from association with the large firm, a "free consultant" from the large firm, and a method to break into the defense industry. The large firm sought to leverage external technology and accelerate the new product development process (Herther, 1986, 137).

The following list summarizes the reasons for partnering as described in the strategic partnership literature:

- 1) risk sharing - (Powell, 1987, 71; Contractor and Lorange, 1988; Mytelka, 1987, 22);
- 2) financing - funding development, reducing its costs (Herther, 1986, 138; Hull and Slowinski, 1988, 200; Devlin and Bleackley, 1988, 19);
- 3) gaining credibility from association with the partner (Herther, 1986, 138; Hull and Slowinski, 1988, 206);
- 4) speed - to accelerate new product development (Herther, 1986, 135);
- 5) related and unrelated diversification (Venture Economics, 1987, 4);
- 6) new technology access (Hull and Slowinski, 1988a, 4; Venture Economics, 1986, 4; Mytelka, 1987, 20);
- 7) economies of scale (Mytelka, 1987, 20); and,
- 8) market access (Powell, 1987, 71; Mytelka, 1987, 22; Herther 1986, 138).

Though the literature reveals a variety of reasons for partnering, one fundamental motivation dominates all others: an organization will partner to improve

it's competitive position (Devlin and Bleackley, 1988, 18; Hull and Slowinski, 1988a, 4; Doz, 1988, 324). This motivation, along with the eight others previously listed, will be tested for their presence in the government-business partnerships.

Control Mechanisms of a Strategic Partnership

The literature discusses the mechanisms by which control is achieved in a strategic partnership. These mechanisms are the contractual provisions of the agreement and the subsequent monitoring practices of the partners. The perspective which the strategic partnership literature takes towards control corresponds to that of the theoretical literature on agency theory. Under agency theory, control of agency costs is achieved through the provisions of the initial contract and the subsequent monitoring and involvement by the principal (see Jensen and Meckling, 1976; Smith and Warner, 1979; Eisenstadt, 1985; ; Jog, Lawson, and Riding, 1989).

The strategic partnership literature reveals several categories of contractual provisions which define the parameters of the relationship. The following is a list of the categories of provisions found in strategic partnership agreements, along with the authors who have empirically examined these provisions:

- 1) specific performance requirements (Hamel, Doz, and Prahalad, 1989);
- 2) limits on the scope of activities (Devlin and Bleackley, 1988, 21; Harrigan, 1986, 33; Competitive Alliances, 1987, 47);
- 3) provisions for issues likely to cause friction, as for example dividend policy, management structure, asset valuation, export controls and technology protection Competitive Alliances, 1987, 44; Perlmutter and Heenan, 1986, 150;

- 4) controls over the flow of materials, personnel, technology, capital and information (Harrigan, 1985, 95 and 1986);
- 5) duration of the agreement (Competitive Alliances, 1987, 44);
- 6) terms of renegotiation (Harrigan, 1985, 95; Devlin and Bleackley, 1988, 21); and,
- 7) the divorce clause (Competitive Alliances, 1987, 44; Harrigan, 1985, 95).

Even though a strategic partnership necessitates an agreement specifying restrictive contractual provisions, the long-term contract which defines the partnership is nevertheless characterized by a degree of flexibility. As Doz (1988, 326) observes, "Agreements must be precise enough to allow for commitments, but not so precise as to leave no room for learning and interpretation". MacNeil (1978, 865) also remarks on the flexibility of long-term contracts,

The two common characteristics of long term contracts are the existence of gaps in their planning and the presence of a range of processes and techniques used by contract planners to create flexibility in lieu of either leaving gaps or trying to plan too rigidly.

Monitoring of the strategic partnership requires a surveillance system designed to sense potential divergences between partners. Perlmutter and Heenan (1986) suggest that such a system would include progress reports of the partnership which analyze the growing or declining level of mutual trust and respect between partners, supplemented by operational progress and performance reports.

The vehicle by which ongoing monitoring of the partnership takes place is the "alliance coordination unit" (Competitive Alliances, 1987, 76), also known as the "coordination agency" (Jackson and Morgan, 1982). Members of the alliance

coordination unit design the interface points between organizations (Competitive Alliances, 1987, 76). Membership includes the participation of the senior management of both organizations (Doz, 1988, 336). Senior management may also participate on the partner's board of directors (Doz, 1988, 336).

Though senior management participation in monitoring the partnership is highly desirable, research has revealed that their level of participation is not consistent over time. It has been noted that one of the biggest problems with the management of the partnership is that top management participation is strong during negotiations and early into the partnership but gradually diminishes after the deal is signed (Proceedings from CATA Conference, 1987).

Other governance bodies or "joint steering committees" are also formed at lower operational levels. Doz (1988, 336) noted that the proliferation of committees will cause them to become disjointed, and lead to problems in vertical communications within each organization. Litwak and Hylton (1962) found evidence for the hypothesis that coordinating agencies will develop and continue to exist if formal organizations are partly interdependent, if they are aware of this interdependence, and if the coordinating agency can develop standardized units of behaviour for the organizations whose activities it is coordinating.

Summary and Conclusion

There is at present a lack of literature which directly addresses the relationship between government and business under long-term agreements like the Memoranda of Understanding. This void in the literature is understandable, in light of the fact that these formalized arrangements have only recently been introduced.

The literature on strategic partnerships is useful in providing an analytical model for examining the nature of government-business partnerships under the MOU. The dimensions of the strategic partnership model as drawn from the literature are first, the attributes of a strategic partnership; second, the reasons for entering into the relationship; and third, the control mechanisms of the agreement. Though some controversy exists as to what structural arrangements qualify as strategic partnerships, there is nevertheless a consensus in the literature that all strategic partnerships are central to the future direction and competitive position of the firm.

Attributes identified in the literature include the presence of strategic objectives, the long-term duration of the agreement, the exchange of complementary resources, shared influence in decisions, and a champion for the partnership in each organization.

Several reasons for strategic partnering have been identified, the most significant being the improvement of the organization's competitive position. Control mechanisms, in accordance with agency theory, have been identified as specific contractual provisions and monitoring practices. Monitoring practices involve progress reporting, the establishment of an alliance coordination unit, senior management participation, and joint steering committees at many operational levels.

CHAPTER 4

HYPOTHESES

The literature review focused on the dimensions of the strategic partnership model, namely the attributes, motivations and control mechanisms associated with strategic partnerships. Several hypotheses flow from this model concerning correspondences between the strategic partnership model and the government-business partnership. The first eight hypotheses address the attributes which have been identified in the literature. The ninth hypothesis addresses reasons for entering into the relationship, and the final two hypotheses address control mechanisms.

Attributes of the Government-Business Partnership

The first attribute of a strategic partnership discussed in the literature is the presence of strategic objectives. Objectives are strategic if they focus on the future direction of the organization and aim at enhancing the organization's competitive position (Devlin and Bleackley, 1988). The hypothesis relating to strategic objectives is as follows:

Hypothesis 1:

The objectives of the government-business partnership (under the MOU) are perceived by both parties to be strategic in nature.

The second attribute is the long-term duration of the agreement. Harrigan (1988) found that the average duration of a strategic alliance was three and a half years. The hypothesis will test whether the duration of the government-business

partnership under the MOU conforms to this time frame.

Hypothesis 2:

The duration of the government-business partnership is long-term, that is, a multi-year agreement of three and a half years or more.

Another attribute of a strategic partnership, as discussed in the literature, is the exchange of complementary resources. Evidence suggests that both partners in a strategic partnership exchange complementary resources beyond financing. In the case of the government-business partnership, it is obvious that the company contributes more than just dollars to the project at hand. It is not so obvious however that the government contributes more than just dollars. The third hypothesis therefore addresses the question of the government's contribution of resources beyond financing.

Hypothesis 3:

The government contributes identifiable resources beyond financing, in the areas of research and development, marketing and manufacturing.

The fourth attribute of a strategic partnership is shared influence in decisions relating to various areas of activity. Four hypotheses are developed concerning perceptions of shared influence between the government and the company. The use of perceptions to measure shared influence in decision-making has been employed in a previous study on strategic partnerships (Hull and Slowinski, 1988). A five point scale will be used to measure the degree of shared influence in decision-making in four areas of activity (finance, R&D, marketing and manufacturing), as was done in the Hull and Slowinski study. If influence is shared, both sides are expected to have a

great deal of influence in decisions relating to various areas of activity.

Hypothesis 4:

The government is perceived by the company as having a great deal of influence in decisions relating to the following areas of partnership (project) activity: finance, R&D, marketing and manufacturing.

Hypothesis 5:

The government perceives itself as having a great deal of influence in decisions relating to the following areas of partnership (project) activity: finance, R&D, marketing and manufacturing.

Hypothesis 6:

The company is perceived by the government as having a great deal of influence in decisions relating to the following areas of partnership (project) activity: finance, R&D, marketing and manufacturing.

Hypothesis 7:

The company perceives itself as having a great deal of influence in decisions relating to the following areas of partnership (project) activity: finance, R&D, marketing and manufacturing.

The final attribute is the presence of a champion for the partnership in each organization. The role of the champion is to coordinate or "broker" relationships between the partner and different functions of the champion's own organization. The champion also acts as an advocate for the partnership within his or her own organization.

Hypothesis 8:

A champion is present in both organizations involved in the government-business partnership.

Reasons for Entering into the Government-Business Partnership

The ninth hypothesis addresses reasons for entering into the government-business partnership.

Hypothesis 9:

There are correspondences between the reasons for the company entering into the government-business partnership and the reasons reported for a company entering into a strategic partnership.

Reasons on the government's side for entering into the partnership under the MOU will not be tested as a hypothesis because the government's reasons are driven by public policy, which intuitively seems quite different from the business reasons described in the strategic partnership literature. Data on the government's reasons for entering into the agreement will nevertheless be gathered due to their significance in explaining the nature of the relationship, and due to the fact that some of the reasons may still correspond to the strategic partnership model.

Control Mechanisms of the Government-Business Partnership

The last two hypotheses refer to each of the aspects of control in the strategic partnership model, namely contractual provisions and monitoring practices.

Hypothesis 10:

There are correspondences between the categories of provisions flowing from the MOU and the contractual provisions reported in strategic partnership agreements.

Hypothesis 11:

There are correspondences between the monitoring practices flowing from the MOU and the monitoring practices reported to flow from strategic partnership agreements.

CHAPTER 5

RESEARCH METHODOLOGY

The two populations consisted of first, the government project officers who are each responsible for managing one of the nine existing Memoranda of Understanding between the Government of Canada and companies in the aerospace/defence electronics industry; and second, the corresponding company officers who are the principal liaisons for the companies involved in these MOU's. The intention was not to draw a random sample, but rather to interview the entire population of government project officers and company officers involved in MOU's. As a result, all government project officers and all company officers in these two populations were interviewed.

The number of Memoranda of Understanding, as well as the names and locations of government project officers (in Ottawa) and corresponding company officers (in Montreal and Toronto), were determined as a result of information supplied by selected government project officers. The companies participating in the study include Allied Signal-Garrett Canada Ltd., Bendix Avelex Canada Ltd., Boeing-DeHavilland Canada Ltd., Canadian Marconi Ltd., Canadair Aerospace Group - Bombardier Ltd., Litton Systems Ltd. (Canada), McDonnell Douglas Canada Ltd., Pratt and Whitney Canada Ltd., and Spar Aerospace Ltd.

The MOU's in question date as far back as 1983, when the first MOU was introduced. A pre-test revealed that only one company had two successive MOU's since 1983; no other company had more than one MOU. For the case involving two consecutive MOU's, only the most recent MOU was included in the study because of

the difficulty experienced by the government respondent during the pre-test in differentiating between the two consecutive MOU's, with respect to questions of perception and opinion. Both MOU's were included however when describing the size and significance of financial contributions under MOU's.

Two separate semi-structured interview schedules were employed, one for government project officers and another for company officers (Appendices F & G). The interview schedules consisted of both structured and unstructured questions. The design of the instrument includes attitude/perception scales, rating scales and open-ended questions. Data analysis was based on qualitative and anecdotal data, frequencies, means, and rankings.

All questions which could possibly be answered by both populations were posed, so that large discrepancies in responses could be checked, and so that data on the perceptions and factual accounts of representatives from both organizations could be gathered and analyzed.

A pre-test was conducted in June 1989 with a government project officer from ISTC. The purpose of the pre-test was to identify problems, if any, in wording, interview schedule format, and other areas which impact on the validity of the findings. The interview schedules were modified as a result of this pre-test.

The government project officer selected for the pre-test was responsible for the negotiation, management and actual drafting of an individual MOU. This project officer also had an intimate knowledge of the companies to be sampled. It was felt that an interview with this single project officer would be sufficient to determine which questions were answerable in terms of their understandability, validity and confidentiality. The size of the pre-test sample was deemed reasonable when compared

to the small size of the populations.

Supplementary personal interviews were conducted with ISTC senior personnel (see Appendix H). Interviews were conducted with, in ascending order above the project officer level, two ISTC branch managers (Airframe Systems, and Propulsion and Aircraft Subsystems), one acting-director (Space Systems), and the Director-General of the Aerospace Defence and Industrial Benefits Branch. The purpose of these additional interviews was first, to explore perceptions at the senior management level of ISTC regarding the strategic objectives of the MOU; second, to expand on the reasons for the federal government entering into MOU's; and third, to further explore perceptions regarding the presence of a partnership-type relationship under the MOU.

CHAPTER 6

RESULTS

Characteristics of the Respondents

Interviews were successfully conducted with eight government project officers and nine company officers. There was one less government respondent than there were company respondents because of the fact that one of the government project officers was responsible for two MOU's. The response rate was therefore one hundred percent for the two populations involved in MOU's.

All eight government respondents had the title of "Project Officer", and four of the eight indicated that they were "Senior Project Officers". Seven of the eight were engineers by profession. Half of the project officers had expertise in R&D and manufacturing only, while the other half had expertise in these areas as well as in finance and marketing. One of the government respondents characterized the expertise of government project officers connected with the aerospace/defence-electronics industry as follows,

We look at all aspects of the company across the board. We are technical types, and involved in finance in terms of the financial aspects of the projects and the financial well-being of the company. We are usually less involved on the manufacturing side, but certainly are involved in project R&D and marketing.

The company respondents were all senior officers, reporting to either one of the Vice-Presidents, or to the President. Their titles varied, but they all played a major role in the government relations function of their respective organizations, and were the principal liaisons with the government for issues relating to the MOU. Three of the

nine company officers had the word "Government" in their title, two had the word "Contracts", and two had the words "Business Development". The other two company respondents had the titles "Special Consultant" and "Marketing Manager".

Size and Relative Significance of Financial Contributions

Respondents provided data on the size of financial contributions under MOU's as measured in dollars. Most of the funding arises from the Defence Industry Productivity Program (DIPP), which has a current annual budget of approximately \$ 230 million (1988-89 ISTC estimate). Tables (1) and (2) summarize respectively the number of projects which have been initiated under MOU's in the aerospace/defence electronics industry, and the number of projects expected to be initiated under existing MOU's. Projects are categorized by dollars contributed under the MOU.

TABLE 1
PROJECTS INITIATED UNDER THE MOU

\$ contributed under the MOU	government response *	company response
1. 0-500,000	many	many
2. 500,001 - 1,000,000	4	3
3. 1,000,001 - 5,000,000	36	18
4. 5,000,001 - 20,000,000	22	13
5. 20,000,001 - 50,000,000	7	6
6. > 50,000,000	4	4

* Number of projects per category. One government project officer and two company officers did not respond.

TABLE 2
PROJECTS EXPECTED TO BE INITIATED UNDER THE MOU

S contributed under the MOU	government response *	company response
1. 0-500,000	many	many
2. 500,001 - 1,000,000	0	0
3. 1,000,001 - 5,000,000	22	29
4. 5,000,001 - 20,000,000	12	11
5. 20,000,001 - 50,000,000	2	5
6. > 50,000,000	3	5

* Number of projects per category. One government project officer and two company officers did not respond.

In each of the categories of dollars contributed under the MOU, government respondents consistently reported more projects having been initiated under the MOU than were reported by company respondents. In contrast to projects already initiated, government respondents were generally less optimistic than their company counterparts concerning the number of projects yet to be initiated under the MOU. Removal of the case where the government project officer responded and the company officer did not respond, results in a matched sample of seven government responses and seven corresponding company responses. The patterns described above and exhibited in tables (1) and (2) do not change however as a result of creating this matched sample. For all projects initiated or not, the majority of projects were categorized by respondents in the \$1-5 million and the \$5-20 million ranges of financial contributions.

In order to grasp the relative significance for the company of financial contributions under the MOU, the respondents were asked to describe other sources of financial contributions (provincial government, private sector, etc.). Respondents were then prompted to rate the significance of contributions under the MOU compared

to other sources described. Sources outside the MOU included the Western Economic Development Organization (WEDO), the Atlantic Canada Opportunities Agency (ACOA), the Provinces of Quebec and Manitoba, and various customer sources. In comparing the significance of the MOU with these other sources, the mean response rate on the government's side was 4.67 on a one-to-five scale, and 4.11 on the companies' side. This meant that financial contributions under the MOU were on average between "somewhat more significant" and "far more significant" than the other sources of financial contributions (4=somewhat more significant, 5=far more significant). Respondents most frequently chose to answer "far more significant", with sixty-seven percent of project officers and company officers selecting this response. On average, government project officers reported that eighty nine percent of financial contributions to the company from all external sources fell under the umbrella of the MOU. Company officers reported a similar figure at eighty three percent.

Attributes of the Government-Business Partnership

The interview schedules were designed to test for the presence of specific attributes. There were five attributes tested for: the presence of strategic objectives, the long-term duration of the agreement, the exchange of complementary resources, shared influence in decisions, and a champion for the partnership in each organization. This section summarizes results pertaining to the presence of these attributes in government-business partnerships under the MOU.

Strategic Objectives

Strategic to the Company

For the purposes of this research, objectives are strategic in nature if they focus on the future direction of the organization and aim at enhancing the organization's competitive position (Devlin and Bleackley, 1988). All government project officers indicated that the objectives as stated in the MOU were strategic to the company according to this definition. Seven of the nine company respondents concurred with the project officers. The two remaining company respondents who disagreed that the objectives were strategic felt that the future direction of the company was dictated by the marketplace rather than by the MOU, to the extent that market-based considerations dominated MOU intentions. Appendix B gives a sample of objectives as stated in an MOU.

Six of the nine company respondents said that the MOU, while focusing on the future direction of the company, did not necessarily alter that direction but instead was consistent with the direction already followed by the company. All nine company respondents stated that the MOU was integrated into their company's strategic business plan. Such integration was not accomplished however by adding the MOU to the strategic business plan as an appendix; rather, the operational effects of the MOU were integrated into the planning statements and budgets of the individual business units.

Many company and government respondents offered additional comments as to why they thought the MOU was strategic. Three quarters of all respondents reasoned that the long range planning aspect of the MOU caused it to be strategic in scope. In two cases, the MOU was said to be strategic because it was closely connected to the

sale of a government-controlled corporation to a private sector buyer. Three additional points were stressed by company and government respondents as to why the MOU was strategic: first, the MOU involved risk-sharing for major projects; second, it focused on R&D in leading-edge technologies; and third, the MOU created a level playing field for Canadian companies competing against subsidized foreign multinationals.

The strategic nature of the MOU and its objectives was not only recognized by the government project officers and company officers, but also by senior personnel from ISTC (branch managers, an acting-director and a director general). To ISTC senior personnel, the MOU and its objectives were said to be strategic in terms of company growth and market penetration. The strategic effect is apparent over the long term, as was pointed out by the Director-General,

The MOU has a long-term effect on corporate strategy. For example, an American multinational might decide that without DIPP support under the MOU, there is no competitive advantage in giving a mandate to their Canadian subsidiary for expansion into a new technology.

Project Survival

The MOU is likely to be strategic if it is perceived as vital to the survival of projects undertaken by the company. Two government respondents and two company respondents agreed that some large projects would probably not be undertaken if there were no MOU because of the time lag involved in approving DIPP financial contributions without an MOU. Another government project officer said that he could not see any projects going ahead without the MOU because the agreement was closely linked to the sale of the company. All other respondents indicated that the vast majority of projects would probably survive without an MOU if the DIPP program was

still in place, though project approval would be slower and the scope of the projects would be reduced.

If both the MOU and the DIPP program did not exist, half the government project officers and three of the nine company officers conceded that no new projects normally eligible for DIPP would have proceeded. DIPP was said to be invaluable because it gave far better terms than a banker would, though most DIPP financial contributions were repayable. Also, DIPP allowed the company to bring the project's breakeven point back earlier in time which made many previously marginal projects worthwhile.

Of those respondents who predicted that projects would have gone ahead without DIPP, only one government respondent and one corresponding company respondent suspected that virtually all projects would have proceeded. The three remaining government project officers and four company officers predicted that less than fifty percent of the projects would have been undertaken without DIPP.

Strategic to the Government

A question was posed during the interviews to capture perceptions of the MOU's effectiveness in meeting the government's strategic objectives in industrial development policy. The intent was to determine if the MOU was perceived by the respondents as being "strategic" to the government. Results showed that both government and company respondents rate the MOU to be between "mostly" and "extremely" effective in meeting the strategic objectives of the government in industrial development policy, with respective means of 4.00 and 4.63 (on a one-to-five scale, mostly effective=4 and extremely effective=5).

Senior personnel from ISTC also perceived the MOU to be effective in meeting the strategic objectives of the government. One respondent believed the MOU was extremely effective because it allowed the federal government to reduce the cost per project to the government while maintaining a high level of effectiveness. Other senior personnel viewed the MOU to be mostly effective rather than extremely effective, because they remarked that even though the MOU was effective, it was not perfect.

Duration of the Agreement

The first MOU came into effect on January 1, 1983. It was the only MOU to be later replaced, and this was the result of its expiration after five years. Of the nine MOU's currently in place, seven are of a five year duration and two are of an indefinite duration. In all of the cases of MOU's having a five year duration, both the government and company respondents agreed that the relationship is expected to last beyond the specified duration.

There was a consensus of opinion amongst respondents that six of the nine MOU's represent the formalization of a relationship that already existed between the government and the company prior to the signing of the MOU. In each of these six cases, both the government project officer and company officer agreed on the question of formalization of a relationship. In one other case, the company officer stated that the MOU was the formalization of a previous relationship, but the government project officer was at odds with this opinion. In only two cases did both sides agree that the MOU was clearly not the formalization of a previous relationship; these were cases where the MOU was linked to the sale of a government-controlled corporation.

TABLE 3
AGREEMENT ON THE QUESTION OF THE MOU REPRESENTING
THE FORMALIZATION OF A PREVIOUS RELATIONSHIP

	number of cases
government and company both responded "yes"	6
government responded "yes" and company responded "no"	0
government responded "no" and company responded "yes"	1
government and company both responded "no"	2

Even though the majority of respondents believed that the MOU was the formalization of an existing relationship, in five distinct cases respondents also believed that the MOU established in some way a new relationship. In two other cases, while the government project officer held the opinion that a new relationship was created, the company representative disagreed. In yet two other cases, both sides agreed that no new relationship was established.

TABLE 4
AGREEMENT ON THE QUESTION OF THE MOU
ESTABLISHING A NEW RELATIONSHIP

	number of cases
government and company both responded "yes"	5
government responded "yes" and company responded "no"	2
government responded "no" and company responded "yes"	0
government and company both responded "no"	2

Resources Contributed by the Government beyond Financial Support

The following table summarizes the level of agreement between government project officers and company officers regarding resources contributed by the government beyond financial support, in the context of the MOU.

TABLE 5
AGREEMENT ON THE QUESTION OF RESOURCES
PROVIDED BY THE GOVERNMENT BEYOND FINANCING

resources	number of cases			
	A	B	C	D
sales contacts/trade shows	6	1	1	1
marketing consulting	6	1	1	1
supplier contacts	5	3	0	1
direct research	5	0	1	3
technical consulting	4	2	1	2
manufacturing consulting	1	0	2	6
direct sales force	0	0	1	8
financial consulting	0	0	0	9
total:	27	7	7	31
	38%	10%	10%	42%

A: number of cases where government and company both responded "yes" to the question of a resource being provided

B: number of cases where government responded "yes" and company responded "no"

C: number of cases where government responded "no" and company responded "yes"

D: number of cases where government and company both responded "no"

As can be observed in Table 5 above, there is mutual agreement in eighty percent (38% + 42%) of the cases involving MOU's as to whether or not a given resource was contributed by the government beyond financing. The preponderance of agreement indicates that five types of resources were contributed by the government beyond financing: sales contacts/trade shows, marketing consulting, supplier contacts, direct research and technical consulting. It is interesting to note that in three

different cases involving MOU's, the government project officer claimed that supplier contacts were contributed even though the company respondent did not agree. A similar situation was apparent in two cases involving technical consulting. When asked to describe resources other than those mentioned in the table, respondents described only two resources: ISTC's promotion of joint ventures and licensing opportunities, and ISTC's support and intercession on behalf of the company during applications with External Affairs for export permits.

It was generally agreed that those resources not contributed by the government include manufacturing consulting, direct sales force and financial consulting. Manufacturing consulting was however mutually acknowledged as a contributed resource in one case, and in two other cases was believed by the company officer to be contributed even though the government project officer did not agree.

Qualitative Data on Contributed Resources

In describing sales contacts and trade shows, the respondents emphasized the importance of large trade shows such as Singapore, Hanover, and the Paris Airshow. At these various trade shows, financial and logistical support is offered to Canadian companies by the Department of External Affairs (DEA), through their Canadian Trade Commissioner network. External Affairs, along with ISTC, also contribute by suggesting names of potential foreign customers as well as by coordinating efforts to help companies establish contacts with foreign government and private sector customers.

Marketing consulting is made available from ISTC in the form of market intelligence, sourced either internally or through the cooperation of other government

departments (Department of External Affairs - Program for Export Market Intelligence, Department of Communications and Department of National Defence). Individual project officers also directly provide marketing consulting through joint market-forecasting with the company. In the case of one company having an MOU, the federal government hired an external consultant to conduct a large market research study which directly benefited the company. Also, government project officers have been known to bring together potential buyers and sellers of new products, particularly when both interested parties are members of the Canadian aerospace/defence electronics industry and are both involved in an MOU or an individual DIPP contract.

Of all the respondents questioned, only one company officer asserted that direct sales force was contributed by the federal government. This company officer recounted the manner by which ISTC worked closely with the company to help the company sell their products to foreign governments. In this case, the government was described by the company respondent as a physical participant in the company's marketing campaign. Direct selling was characterized by this particular company officer as the most significant resource received from the government beyond financing.

Evidence suggests that the federal government establishes supplier contacts on behalf of the company during the R&D stage of a new project. Contact established with suppliers may also carried through to the manufacturing stage of the project. Respondents commented that it is the responsibility of government project officers to keep an active role in finding Canadian suppliers for the company whenever possible. The use of Canadian suppliers by companies with MOU's has been deemed in some cases to be a necessary condition for meeting the Canadian content requirements of DIPP contracts under the MOU. An exception to this rule is when Canadian suppliers

cannot meet the technical requirements of the particular project; in such a case, the company would have the right to search for suppliers outside of Canada.

Direct research is contributed to the company through research contracts and scientific consultation with the National Research Council (NRC), the National Aeronautical Establishment (NAE), and the Defence Research Establishment (part of DND). Even though contracted research does not enter into the strict definition of the MOU agreement, government project officers and company representatives nevertheless characterize contracted research as an important aspect of the relationship. All respondents agree that companies benefit from access to government research facilities, and from consultation with the federal government's scientific community.

During their ongoing interface with companies, government project officers offer technical input whenever appropriate. For example, one of the project officers described himself as an active participant in the company's productivity work group. Generally however, project officers' technical contributions were said not to go beyond that of monitoring the technological progress of the company's projects. The technical role of project officers is limited because company engineers are recognized as already being experts in their field and at the forefront of new technology.

Time devoted to the contribution of resources

An attempt was made during the interviews to discover the proportion of the government project officers' working time devoted to offering each of the resources previously mentioned. A similar attempt was made regarding the proportion of working time devoted by government personnel other than project officers. The purpose of these attempts was to obtain an objective measure of the relative

significance of each contributed resource. Results were however imprecise because of the difficulty that government project officers had in breaking down and classifying their own working hours, and the even greater difficulty experienced in trying to classify the working hours of other government personnel. What can be said is that government project officers spend approximately half of their working time on project administration, including background research for new projects and the identification of new investment opportunities. Project officers further spend between ten and thirty percent of their time on the administration of the MOU document. This proportion increases during the negotiation period of a new MOU document, when fifty to ninety percent of the project officer's time is devoted towards performing MOU administrative duties and participating as a member of the MOU negotiation team. Project officers additionally spend fifteen to thirty percent of their time finding suppliers for the companies and engaging in technical and marketing consulting. The proportion of their time spent towards contributing other resources was not specified.

Individuals at ISTC other than project officers who provide resources were identified as the branch managers and other senior management (directors, directors general). Branch managers, in working closely with project officers, are perceived to allot their time in a manner similar to that of the project officers. Other senior management, on the other hand, are perceived to be more focused on general policy issues and review functions relating to the MOU, rather than on directly contributing any of the previously mentioned resources.

Decision Making Influence

Data were collected on the degree of influence that the government and the company were each perceived to have in decisions relating to project activity under the MOU. Table 6 illustrates government project officer and company officer mean responses across the nine MOU's, for decisions relating to project financing, research and development, marketing and manufacturing.

TABLE 6
INFLUENCE IN DECISIONS RELATING
TO VARIOUS AREAS OF ACTIVITY

	government response *	company response
Finance		
government influence in source of company's portion of financing	1.00	1.11
government influence in amount of company's financing (sharing ratio)	3.86	3.86
company influence in amount of government financing (sharing ratio)	2.22	2.61
Research and Development		
government influence in R&D	2.61	2.11
company influence in R&D	3.97	4.64
Marketing		
government influence in marketing	2.67	2.14
company influence in marketing	4.25	4.56
Manufacturing		
government influence in manufacturing	2.22	1.67
company influence in manufacturing	4.31	4.64

* Means across all responses. Decision-making influence was rated by government and company respondents on a one-to-five scale as follows: 1 - no influence; 2 - a small amount of influence; 3 - a moderate amount of influence; 4 - a great deal of influence; and 5 - total or sole influence in decisions.

From the first set of numbers in the table above, it is apparent that the government has no influence in decisions relating to the source of the company's portion of project financing, according to both government and company responses; that is, the government has no say in how or where the company will source that portion of project financing which the government does not contribute. Company respondents remarked that there was no need for the government to be concerned about the company's portion of project financing because of the company's sheer size and abundant availability of working capital, and because of the fact that money for new projects was often sourced internally.

Both the government and company respondents agreed that the government has on average a great deal of influence in decisions relating to the amount of the company's portion of project financing, that is, the amount of financing that the company must put up for a project (sharing ratio). On the other hand, the company was perceived by both sides to have a small to moderate amount of influence on the sharing ratios for projects. Respondents pointed out that any influence from the company in this area is manifested during both the negotiation of the MOU and the MOU annual reviews.

Results for research and development reveal that both the government and company respondents perceived the government as having a small to moderate amount of influence in decisions relating to research and development. One respondent explained that the federal government influenced R&D in terms of timing and scope, and also encouraged R&D in specific "strategic technologies". It was made clear however by all respondents that the government did not attempt to dictate the particular R&D performed by the company. The company, on the other hand, was perceived by

both government and company respondents to have a great deal of influence in R&D decisions. Company officers rated the company's influence in R&D to be closer to "total or sole" influence, which was higher than the rating given by the government project officers.

In terms of marketing, both government and company respondents perceived that on average, the government displays a small to moderate amount of influence in marketing decisions. In contrast, both perceived that the company has a "great deal" to "total amount" of influence in marketing decisions. A similar situation exists for manufacturing decisions, though in manufacturing decisions the government's influence is perceived to be less than it is for marketing decisions.

It is interesting to observe in Table 6 that in almost all cases, the government respondents' ratings of government influence were higher than the company respondents' ratings of government influence. Likewise, the company respondents' ratings of company influence were higher than the government respondents' ratings of company influence. Also, the government was perceived to have its greatest decision-making influence in the area of finance (sharing ratio), followed in order by marketing, research and development, and manufacturing. The company had its greatest decision-making influence in manufacturing, followed by marketing, research and development, and finance (sharing ratio).

During the pre-test, a government project officer suggested that influence in decisions varied across stages of the project approval process. Four stages were suggested by the project officer, namely the consultation stage (pre-submission of a project proposal), the negotiation stage (post-submission of a project proposal), the project approval stage (formal approval by government), and the implementation stage

(post-signing of a DIPP contract). Responses indicated however that influence in decisions did not vary across these stages, since the same rating for influence was generally given across the four stages.

Table 7 illustrates the number of cases where a respondent gave the same rating across the four stages of the project approval process. The first number "9" in the Table 7 indicates that each of the government respondents rated government influence in decisions to be the same across stages, on a one-to-five scale (see also Table 6). In this particular example, there were no differences in the rating given by an individual government respondent across stages with respect to the question of government influence in decisions relating to the company's source of financing. The remaining numbers in Table 7 illustrate that influence in decisions is generally the same across stages. It is also obvious from the table that more company officers rated influence to be the same across stages than did government project officers.

TABLE 7
INFLUENCE IN DECISIONS RATED THE SAME
ACROSS PROJECT STAGES

	government response *	company response
Finance		
government influence in source of company's portion of financing	9	9
government influence in amount of company's financing (sharing ratio)	4	8
company influence in amount of government financing (sharing ratio)	6	7
Research and Development		
government influence in R&D	7	9
company influence in R&D	5	6
Marketing		
government influence in marketing	5	9
company influence in marketing	5	8
Manufacturing		
government influence in manufacturing	7	8
company influence in manufacturing	5	9
* Number of respondents who rated influence in decisions to be the same across the four stages of the project approval process.		

Further to exploring the government's influence in decisions, respondents were asked whether the government actually participated in making final decisions in areas of project activity. As can be observed in Table 8, a majority of responses indicates that the government participates in making final decisions in only one area, that of finance (sharing ratio). In the area of research and development, answers were mixed as a majority of government respondents held that the government participates in making final decisions, while only a minority of company respondents agreed.

TABLE 8
GOVERNMENT PARTICIPATION IN
MAKING FINAL DECISIONS

	government response *	company response
government participation - source of company's financing	0	0
government participation - amount of company's financing (sharing ratio)	22	36
government participation - R&D	17	6
government participation - marketing	6	1
government participation - manufacturing	6	1

* Number of responses indicating that the government participates in making final decisions. A total of 36 possible "yes/no" responses: 9 respondents x 4 project stages. In one case, a government project officers responded to the question relating to the area of financing, but not relating to R&D, marketing and manufacturing.

A Champion in both Organizations

With the exception of one government project officer and one company officer, all respondents perceived themselves to be the champion for the partnership (MOU) within their own organization. The term champion was defined as "the coordinator of functional activities relating to the partnership, and an advocate for the partnership within the organization" (Doz 1988; Hull and Slowinski 1988). The project officer and company officer who did not perceive themselves as champions believed that they were not necessarily strong advocates for the relationship under the MOU. One of the project officers and three of the company officers who did describe themselves as champions were careful to add that there may be an individual at their level of the organization or above who also acts as an advocate for the relationship under the MOU.

The literature suggests the role of the champion for the partnership is adopted by the principal liaison (Doz 1988, Hull and Slowinski 1988). All respondents stated that they were the principal liaison for their organization in dealing with the partner organization. One company officer added that there was another individual in his company who was also a principal liaison.

In order to examine the degree of interaction between the principal liaison and members of the partner organization, a scale was developed to measure the frequency of communications between the principal liaison (respondent) and individuals in the partner organization. Table 9 depicts the level of interaction between the principal liaison of each organization and members of the partner organization.

TABLE 9
INTERACTION BETWEEN THE PRINCIPAL LIAISON
AND MEMBERS OF THE PARTNER ORGANIZATION

1. government principal liaison (project officer)			
communications with:	verbal	written	briefings
a) company principal liaison (company officer)	5.33 *	4.56	3.22
b) other top management:			
President	2.78	2.78	2.78
VP Finance	3.67	3.22	2.89
VP R&D	3.22	2.75	2.75
VP Marketing	3.11	2.50	2.50
VP Manufacturing	3.44	3.00	2.88
c) middle and lower level management:			
finance	3.11	2.33	1.44
R&D	3.11	2.44	2.11
marketing	2.67	2.00	1.67
manufacturing	1.67	1.56	1.00
2. company principal liaison (company officer)			
communications with:	verbal	written	briefings
a) government principal liaison (project officer)	4.78	4.33	3.77
b) other government experts in:			
finance	2.11	2.00	2.00
R&D	2.33	2.00	2.00
marketing	2.44	2.22	2.00
manufacturing	1.00	1.00	1.00

* Means of all responses for the frequency of cross-communications. Scale: 1. not at all, 2. less than once a year, 3. yearly, 4. monthly, 5. weekly, 6. several times per week.

As can be seen in the table above, communications are the most frequent between the principal liaisons of each organization. Verbal communications between principal liaisons happen more than once a week on average; written communications take place on average between weekly and monthly, and briefings occur between monthly and yearly. More generally, the numbers in Table 9 show that in all cases

of cross-communications, verbal communications are more frequent than written communications, and written communications are equally frequent or more frequent than briefings.

At the Vice-President level of the company, the government's principal liaison most often communicates with the VP Finance, followed in order by the VP Manufacturing, VP R&D, and the VP Marketing. All verbal communications at the Vice-President level takes place on average between monthly and yearly. Interaction with the President is less often than with the VP's, occurring on average slightly less than once a year.

Communications between the government's principal liaison and middle/lower level management is less often on average than at the VP level, and is in a different order of functional activity. Interaction is most frequent at lower levels with finance and R&D, followed in order by marketing and manufacturing. On the company's side, the principal liaison's interaction with government experts other than the government project officer is rare, and is nil in the case of communications with manufacturing experts.

During the interviews, there was no clear consensus as to the total number of hours of contact per month between the government's principal liaison and all company representatives for issues relating to the MOU and its projects. Government responses varied from one to ten hours of contact per month, though all government respondents agreed that contact increased dramatically during the negotiation period of the MOU. One government respondent estimated that the negotiation period lasted six months, with two years of prior preparation by the project officer. Since the respondent was referring to the first MOU introduced by ISTC, he hastened to add that this was

probably the longest preparation time to date for an MOU.

Government personnel other than the principal liaison interacted with company representatives far less often, that is, either "once a year for a few hours" or "once a month for one hour or less". According to half the government respondents, some of these other government personnel had expertise in financial analysis and technical R&D. Also, three quarters of government respondents stated that government personnel with marketing expertise engaged in dialogue with the company. Only one out of nine respondents said that government manufacturing experts interacted with the company. Finally, according to all government respondents, ISTC's senior management (branch managers, director, director general) was occasionally in direct contact with company personnel, as were legal experts (Department of Supply and Services for DIPP contracts).

Respondents remarked that all government contact with the company was coordinated through the ISTC's principal liaison. Such structured lines of communication did not necessarily exist however on the company's side, as one company officer noted:

We have a very open relationship. If the project officer or his superior (branch manager) wants to discuss a point pertaining to a project under the MOU, then they have free access to managers within our company. The project officer may need to talk to myself or the Vice-Presidents of Finance or Marketing, or even to someone in manufacturing.

From the company's perspective, the number of hours of contact between the company's principal liaison and government personnel varied between half an hour and fifteen hours per month, depending on the status of the MOU. If the MOU was

already signed and in place, there was less interaction. Company officers emphasized the importance of the annual MOU review meetings as a forum for discussion and negotiation.

Every single company respondent reported that company experts in finance and R&D interacted with government representatives. Two thirds of company respondents added that marketing personnel also communicated with the government, and one third said the same for company manufacturing experts. Others identified as being engaged in communications with the government include the president, vice-presidents, contracts director, and legal officers. The number of hours of contact per month between company personnel (other than the principal liaison) and the government varied between a total of two and eight hours of contact per month.

All respondents added that no individuals outside the government or the company (i.e. consultants or lobbyists), interacted on behalf of either organization for issues relating to the MOU and its projects.

Reasons for Entering into the Government-Business Partnership

Data were gathered in an attempt to identify correspondences between the reasons for entering into a government-business partnership under the MOU, and reasons listed in the strategic partnership model.

Government Reasons

Table 10 indicates the number of government respondents who said that a given reason drawn from the strategic partnership model was relevant to the government for

entering into the relationship under the MOU.

TABLE 10
REASONS FOR THE GOVERNMENT
ENTERING INTO THE MOU

1) to gain and sustain competitive advantage for the company	9 *
2) to gain and sustain competitive advantage for the Canada	8
3) risk sharing - financial risk/ funding development	8
4) speed - to accelerate new product development	8
5) diversification of product lines	8
6) new technology access	7
7) risk sharing - technological risk	5
8) risk sharing - market acceptance risk	5
9) market access	5
10) economies of scale	1
11) gaining credibility from association with the partner	0

* Number of government respondents who said that a reason was relevant for the government entering into the MOU.

The majority of government respondents believed that nine of the eleven motivations from the strategic partnership model were relevant reasons for the government entering into the MOU. The reasons given by government respondents were however not aimed at directly benefiting the government, but rather were objectives that the government was assisting the company to achieve. For example, the diversification of product lines was an objective that the government was attempting to achieve for the company, that is, the diversification of the company's product lines. These objectives were also aimed in a broader sense at benefiting the entire industry and Canada as a whole.

Government project officers ranked the reasons listed in the strategic partnership model according to their significance as reasons for the government entering into the MOU. Table 11 presents ranking indices of the significance of reasons for the government entering into an MOU, based on weighted averages of government

responses. As can be observed in the table, the most significant reason ranked by government project officers was first, to gain and sustain competitive advantage for the company; second, to share financial risk; and third, to gain and sustain competitive advantage for Canada. Technological risk-sharing came next in the rankings, which is partially explainable by the fact that many respondents viewed technological risk as inseparable from financial risk. Speed of new product development and diversification of product lines were ranked fifth and sixth respectively. The remaining rankings can be seen in the table. It should be noted that economies of scale and gaining credibility from association with the partner were of little significance, as is confirmed in Table 10. Overall, results from the two Tables (10 and 11) appear to be consistent with each other.

TABLE 11
SIGNIFICANCE OF REASONS FOR
THE GOVERNMENT ENTERING INTO THE MOU

1) to gain and sustain competitive advantage for the company	3.42 *
2) risk sharing - financial risk/funding development	4.29
3) to gain and sustain competitive advantage for Canada	4.57
4) risk sharing - technological risk	4.71
5) speed - to accelerate new product development	5.43
6) diversification of product lines	5.43
7) risk sharing - market acceptance risk	5.86
8) new technology access	5.93
9) market access	6.71
10) economies of scale	9.64
11) gaining credibility from association with the partner	10.00

* Ranking indices. The reason with the lowest index is the most significant reason. Rankings given by a respondent were weighted to total sixty-six (1+2+3+...+11). Rankings were weighted to take into account reasons that were ranked as equally relevant, and reasons that were considered not at all relevant. All reasons that were not considered relevant received a ranking that was an average of the difference between sixty-six and the sum of all other rankings. The index was calculated as the sum of all respondents' rankings for a particular reason, divided by the number of respondents - which was seven, because of two non-responses.

When asked to describe other reasons for the government entering into the MOU, government respondents offered the following:

- 1) to create benefits to Canada in terms of regional diversification, employment creation, increased exports and the use of canadian suppliers;
- 2) to give the company general assurances of a long-term relationship with the government;
- 3) to reduce the overall sharing ratio that the government contributes to the company, by trading off dollars for increased assurance of financial contributions over the long term (this was said not to be true for all MOU's because in some cases, even though the sharing ratio may be decreasing over time, the absolute size of projects in dollar terms is increasing);
- 4) to offer some input into the restructuring of company operations in cases where the MOU is linked to the sale of a government-controlled corporation; and,
- 5) to promote the growth of the aerospace/defence electronics industry in Canada.

Government respondents who offered these other reasons stated that these were just as important as the most relevant "business" reasons described in Table 10.

Additional interviews conducted with senior personnel at ISTC (branch managers, director, director general), also explored the reasons for the government entering into MOU's. ISTC senior personnel agreed with the government project officers' views that the reasons listed in the strategic partnership model applied to the government in terms of objectives that the government was trying to achieve for the company. However, senior personnel at ISTC believed that the significance of each of these reasons would vary from case to case depending on the strategic thrust of a particular MOU: while some of these reasons might apply more or less for a particular MOU, others may not apply at all. ISTC senior personnel offered more "general reasons" or policy objectives for the federal government entering into MOU's with

companies in the aerospace/defence electronics industry. These "general reasons" are summarized as follows:

- 1) to clarify the R&D priorities of the company, and the expectations of both the company and the government.
- 2) to better address problems such as canadian content and the restriction of dividends to a foreign parent.
- 3) to better control financial contributions to a particular company from all federal government sources.
- 4) to lower, in some cases, the financial contribution sharing ratio in exchange for assurance of support to the company over the long-term.
- 5) to provide the decision makers (Director General, Minister and Cabinet) with a better picture of the positioning of the various funded projects within the overall framework of a company.

Company Reasons

Table 12 indicates the number of company respondents who said that a given reason drawn from the strategic partnership model was relevant to their organization entering into the relationship under the MOU.

TABLE 12
REASONS FOR A COMPANY ENTERING INTO THE MOU

1) risk sharing - financial risk/ funding development	9 *
2) to gain and sustain competitive advantage	8
3) risk sharing - technological risk	7
4) diversification of product lines	7
5) speed - to accelerate new product development	6
6) risk sharing - market acceptance risk	4
7) new technology access	4
8) economies of scale	2
9) market access	1
10) gaining credibility from association with the partner	1

* Number of company respondents who said a reason was relevant for the company entering into the MOU

The majority of company respondents believed that financial and technical risk sharing, gaining competitive advantage, diversification of product lines and speed of new product development were relevant reasons for the company entering into the MOU with the government. Four of nine company respondents indicated that market risk-sharing and new technology access were relevant reasons. Only two respondents stated that economies of scale was a relevant reason, and only one respondent indicated that market access and gaining credibility from association the partner were relevant reasons.

Company officers ranked the reasons listed in the strategic partnership literature according to their significance as reasons for the company entering into the MOU. Table 13 presents ranking indices of the significance of reasons for the company entering into an MOU, based on weighted averages of company responses. As can be observed in the table, the most significant reason ranked by company officers was first, to share financial risk; second, to gain and sustain competitive advantage; third, to share technological risk; fourth, to diversify product lines; fifth, to accelerate new product development; and sixth, to share market acceptance risk. Some company respondents remarked that the three risks (financial, technological, and market) were strongly related, and were difficult to rank in separate order. The remaining rankings can be seen in the table. Economies of scale, market access and gaining credibility from association with the partner were of little significance, as is confirmed in Table 12. Overall, the two Tables (12 and 13) appear to be consistent with each other.

TABLE 13
SIGNIFICANCE OF REASONS FOR
A COMPANY ENTERING INTO THE MOU

1) risk sharing - financial risk/ funding development	2.28 *
2) to gain and sustain competitive advantage	3.33
3) risk sharing - technological risk	3.39
4) diversification of product lines	5.38
5) speed - to accelerate new product development	5.44
6) risk sharing - market acceptance risk	5.67
7) new technology access	6.61
8) economies of scale	7.39
9) market access	7.67
10) gaining credibility from association with the partner	7.83

* Ranking indices. The reason with the lowest index is the most significant reason. Rankings given by a respondent were weighted to total fifty-five (1+2+3+...+10). Rankings were weighted to take into account reasons that were ranked as equally relevant, and reasons that were considered not at all relevant. All reasons that were not considered relevant received a ranking that was an average of the difference between fifty-five and the sum of all other rankings. The index was calculated as the sum of all respondents' rankings for a particular reason divided by nine - the number of respondents.

When asked to describe other reasons for the company entering into the MOU, company respondents offered the following:

- 1) to receive a general assurance of a long-term relationship with the government;
- 2) to achieve early consideration and approval of financial contributions;
- 3) to having better forward planning and continuity of development efforts; and,
- 4) to adhere to new government policy which directs the company towards entering into an MOU.

Those company respondents who offered these other reasons said that these were just as important as the other relevant "business" reasons described in Table 12.

Control Mechanisms of the Government-Business Partnership

Control is achieved in a strategic partnership through the contractual provisions of the agreement and the subsequent monitoring practices of the partners. Results were gathered pertaining to the categories of provisions in the MOU and the monitoring practices flowing from the MOU.

Categories of Provisions in the MOU

Categories of provisions drawn from the strategic partnership model were tested for their presence in the MOU. A majority of government and company respondents agreed that fourteen of the twenty-four categories of provisions from the strategic partnership model were present in the MOU. The reliability of this proportion is strengthened by the fact that there was mutual agreement eighty nine percent of the time as to whether or not a category of provision is present in the MOU.

TABLE 14
CATEGORIES OF PROVISIONS IN THE MOU

-
-
1. specific company performance requirements;
 2. the scope of activities/mandate for R&D;
 3. the scope of activities/mandate for manufacturing;
 4. control over the flow of technology between the parent and the company;
 5. control over the flow of money between the parent and the company (transfer of funds other than straight dividends);
 6. control over the flow of information between the parent and the company;
 7. control over the flow of money between the government and the company;
 8. control over the flow of information between the government and the company;
 9. dividend policy;
 10. management structure for joint decision-making/project review;
 11. technology protection;
 12. duration of the agreement;
 13. terms of renegotiation;
 14. the termination clause.

* Categories of provisions which a majority of government and company respondents mutually agree upon to be present in the MOU; for supporting data, see Appendix D.

Of those categories of provisions which the majority of respondents agreed were present in the MOU, some were considered very specific provisions, others moderately specific and a few were considered to be not specific. In Table 14, the categories of provisions which the majority of government and company respondents considered to be very specific include categories # 1,2,5,7,8,9,11,12, and 14. The categories of provisions considered to be moderately specific include categories # 3,4,10, and 13. The only provision considered to be not specific is category # 6, that is, the control over the flow of information between the parent and the company. Data supporting the degree of specificity of the provisions is found in Appendix E.

When asked to describe other categories of provisions in the MOU, government and company respondents put forth the following provisions (see Appendix C for a sample table of contents of a typical MOU):

- 1) a World Product Mandate from the parent that all present and future work pertaining to a project/technology will remain in Canada;
- 2) transfer payments of all forms to the parent at fair market value;
- 3) details of specific company performance targets, namely sales growth, market share growth, R&D reinvestment, employment creation, and job training programs;
- 4) provision for the periodic submission of the company reports detailing operations in Canada and elsewhere; details of reports to include the company's financial performance, a summary of total government assistance to date, projects planned to be brought forward within the coming year, a summary of sourcing of Canadian goods and services, and the sales results from projects already funded; and,
- 5) level of source establishment, that is, a guarantee that the Canadian subsidiary would be considered a second source to take on a project if the American parent does not perform the work.

Monitoring Practices

In keeping with the strategic partnership model, the relationship under the MOU was tested for specific monitoring practices. These practices consist of progress reporting, joint steering committees at many operational levels, an alliance coordination unit, and senior management participation. The following discussion summarizes respondents' descriptions of how these monitoring practices apply to the government-business partnership under the MOU.

Progress reporting is accomplished at the level of the project officer. The project officer monitors the progress of projects through informal daily discussions with the company's principal liaison, with vice-presidents, and with other company officers. Besides informal discussions, progress reporting is also accomplished through formal periodic written reports submitted to the project officer by the company. Progress reports are submitted on a quarterly or semi-annual basis, and include project-specific data such as R&D spending, capital expenditures, and total project costs. In support of these reports, the project officer has been known to conduct periodic inspections on location at the company. Further reports submitted on a semi-annual or annual basis involve company-specific data such as sales growth, market share growth, R&D reinvestment, employment creation, and job training initiatives.

Only three government project officers and four company officers acknowledged that reports submitted to the government by the company (or produced for internal use), dealt with intangible issues like the level of cooperation and trust between the parties. Most respondents believed that these issues were addressed indirectly during discussions with the project officer.

The second level of monitoring is the establishment of joint steering committees. Respondents identified these committees to be the Project Review Group and a variety of ad hoc committees. The Project Review Group (PRG) monitors specific aspects and problem areas of a project on a semi-annual or discretionary basis. The authority of the PRG is established in individual DIPP contracts flowing from the MOU. The timing of the PRG meetings is also set out in the DIPP contracts. On the government's side, the PRG typically consists of the project officer, branch manager, technical experts, a marketing expert, and a contracts expert from the Department of Supply and Services. The company's side involves the company's principal liaison, line managers, and vice presidents on an as required basis.

Respondents indicated that other ad hoc committees are formed when required to address special problem areas, as for example the review of Canadian content by a Canadian Content Review Committee. Company respondents believe that the monitoring process is flexible enough to permit the formation of these committees on short notice.

While there are joint committees set up for individuals at comparable organizational levels of each organization to interact uniquely amongst themselves (for example, the government project officer interacting at the level of the company's principal liaison, or the government technical expert to interact with a company manager in R&D), joint committees also exist to allow individuals at various organizational levels to interact when required. The formation of joint committees such as the Canadian Content Review Committee have permitted organizations to draw on individuals from various levels. This structure is characterized by the respondents as "fluid" and often times "ad hoc".

The third level of monitoring is the MOU Consultative Committee. All respondents indicated that this committee was equivalent to the alliance coordination unit. The MOU Consultative Committee is different from the PRG because it is formed under the terms of the MOU document itself. Its purpose is to examine on a semi-annual or annual basis the performance of all projects initiated under the MOU, and to ensure that projects are within the parameters outlined in the MOU. At the annual review meeting, the MOU Consultative Committee reviews the overall performance of the company compared to targets, and amends sharing ratios on the basis of company-specific and project-specific performance. The annual review meeting also provides a forum for negotiating amendments to company performance targets for the coming year, and for increasing the size and number of new projects under the MOU. Annual review meetings are typically scheduled just after the end of fiscal year and are tied in with the availability of industry-wide data for measurement against company performance.

Membership at the annual review meeting includes the project officer, branch manager, technical experts, directors/director-general, and representatives from other government departments whose programs fall under the MOU. Company representation consists of the company's principal liaison, the president and vice-presidents, and the line managers. While the annual review meeting brings participation from senior management of both organizations, this participation excludes any sort of government representation on the company's board of directors.

Internal monitoring of the MOU within the company is less formal than the process undertaken by the government. Two company respondents described the process as being limited to a scanning of the MOU document by the company's senior

management during internal quarterly report reviews performed by the company. The purpose of this scanning process is to ensure that the company is achieving MOU targets. Four other company respondents indicated that the monitoring process consisted of having the manager of government relations (company principal liaison) track expenses on a monthly basis and review quarterly reports for submissions to the project officer. Only one company respondent claimed that the company had a senior internal review board to review the MOU issues, which in this case consisted of the Executive VP, the VP Finance, and the Manager of Government Relations.

A Partnership under the MOU

The relationship between the federal government and the company under the MOU has been described by ISTC as a "government-business partnership" (1987 Annual Report of DRIE). Respondents were asked whether in fact they considered the relationship to be like that of a partnership. Table 15 illustrates the level of agreement between government and company respondents on this question.

**TABLE 15
AGREEMENT ON THE QUESTION OF
A PARTNERSHIP UNDER THE MOU**

	number of cases
government and company both responded "yes"	6
government responded "yes" and company responded "no"	2
government responded "no" and company responded "yes"	1
government and company both responded "no"	0

In six out of nine cases of MOU's, there was agreement between government and company respondents that the relationship was like that of a partnership. In two other cases, the government project officer perceived the relationship to be like that of a partnership, and the company respondent did not. In one other case, the opposite was true: while the company respondent perceived the relationship to be like that of a partnership, the government respondent disagreed.

The government respondents who perceived the relationship to be like that of a partnership did so for several reasons. The first reason mentioned was the sharing of risks between the partners, including financial, technical and market risks. The second reason offered was the fact that the government provided assistance in many areas of project activity including R&D, marketing and finance. The third reason given was the presence of mutual objectives shared by the federal government and the company, as well as other objectives that were distinct yet non-conflicting. Examples of mutual objectives include access to new export markets and the development of the aerospace/defence electronics industry within Canada.

One government respondent compared the government-business partnership to an unequal marriage, because the government acts as a more passive partner who prods the company into following some favourable direction.

Company respondents who agreed that the relationship was like that of a partnership did so for several reasons. First, company respondents perceived that the relationship was one of risk-sharing, though the government's return was not in the form of profits but rather in the form of long-term benefits to Canada. One company respondent believed that even though the government shared risks with the company, the relationship could not be considered an equal partnership because the government

assumed significantly less risk than did the company.

The second reason why company respondents perceived the relationship to be like that of a partnership was the presence of mutual objectives. This was a reason previously mentioned by government respondents. Company respondents pointed out however that while many objectives were mutually beneficial, some were not, and would be better characterized as competing objectives. One company respondent gave an example of two competing objectives: first, the company's objective to attain the highest productivity with minimum employment; and second, the government's competing objective of simply maximizing employment. The final reason given by company respondents as to why the relationship was like a partnership was the sharing of costs in R&D, which for some projects was as high as fifty percent.

The single government respondent who believed that the relationship was not like that of a partnership gave three reasons for his assessment. First, there was an imbalance of decision-making authority regarding projects, that is, final decisions were generally made by the company. Second, even though the MOU implied an agreement, it was not in itself a legal contract. And third, the government respondent considered the federal government to be a "crutch" rather than a partner, whose objective is to provide a minimum amount of federal assistance for a maximum amount of impact on the Canadian economy.

The two company respondents who believed that the relationship was not like that of a partnership gave the following reasons. First, the MOU is not a contract in the strict legal sense, though the DIPP contracts which flow from the MOU are legal contracts. Second, while risks in a partnership often change dramatically over time causing changes the roles of the partners, risks in the MOU are projected at the

outset, and the MOU does not provide for dramatic changes in risk resulting from shifts in market conditions. Even the annual amendments made to the MOU are perceived by the respondents not to be dramatic, as the government would not wish to diverge greatly from the original terms of the MOU. Third, the two company respondents believed that decisions were made solely by the company on a strict business basis, rather than by joint decision-making with the government.

Additional interviews conducted with ISTC senior personnel (branch managers, director, and director-general), also addressed the question of a partnership-type relationship under the MOU. The Director-General perceived that the MOU implied a partnership, and he pointed to a fundamental statement of the MOU highlighting the presence of a "cooperative relationship". The Director-General observed that the government acts as a partner or investor who is looking for return in the form of economic benefit to Canada. The other ISTC senior personnel believed the mutual objective of creating wealth implies a partnership, even though this partnership is informal rather than legal.

CHAPTER 7

ANALYSIS

This discussion analyzes the results in the context of the research hypotheses. Quantitative and qualitative results are compared with the hypotheses. The analysis will begin however with some comments concerning the characteristics of the respondents and the financial contributions under MOU's.

Characteristics of the Respondents and Financial Contributions

Results show that government respondents all have the title of "project officer", and are all the principal liaisons on behalf of the government for issues relating to the MOU. Project officers are typically engineers, displaying expertise in the areas of R&D and manufacturing. Besides these areas, project officers also work closely with the company in terms of project financing and marketing.

Company respondents are senior officers (reporting to a vice-president or president), and like their government counterparts, are also the principal liaisons for their organizations. The titles given to company respondents vary from "Contracts Officer" to "Marketing Manager", which implies that company respondents are not all from the same functional area of the organization.

Both government and company respondents described financial contributions under the MOU as being large in absolute dollar terms (Tables 1 and 2). Government

respondents are generally less optimistic than their company counterparts concerning the number of projects expected to be initiated under the MOU. Contributions under the MOU are perceived by government and company respondents to be far more significant than any other source of financial contribution received by the company.

Attributes of the Government-Business Partnership

Strategic Objectives

Hypothesis 1, "The objectives of the government-business partnership (under the MOU) are perceived by both parties to be strategic in nature", is supported by the results. All government respondents, and seven of nine company respondents, perceived the MOU objectives to be strategic to the company. Company respondents emphasized that while the objectives are strategic, they do not necessarily alter the direction of the company but are consistent with an established direction.

Other indications were given by company respondents to support the hypothesis regarding the strategic nature of the MOU. First, respondents confirmed that the MOU was integrated into the company's strategic business plan. Second, the MOU was perceived to be strategic because of the long-range planning aspect of the document. Third, the MOU was said to be strategic because, in two separate cases, it was closely connected to the sale of a government-controlled corporation to a private sector buyer. Other points made as to why the MOU was strategic include the following: it involved risk-sharing for major projects; it focused on R&D in leading-edge technologies; and

finally, the MOU created a level playing field for Canadian companies competing against subsidized foreign multinationals.

Project survival was employed in this research as another indicator of the strategic nature of the MOU. It was suggested that the MOU is likely to be strategic if it is perceived as vital to the survival of projects undertaken by the company. While the majority of respondents perceived that projects could survive without a formalized MOU document, most also conceded that new projects normally eligible for DIPP contributions would not survive without DIPP funding. Therefore, underlying funding programs such as DIPP are "strategic" in terms of the survival of new projects, even though the formalized MOU document itself is not.

In addition to objectives being strategic to the company, MOU objectives were also perceived to be strategic to the government. The measure for this was the perceptions of the MOU's effectiveness in meeting the government's strategic objectives in industrial development policy. Results from government and company respondents show that the MOU is rated between "mostly" and "extremely" effective in this regard. These results are supported by ISTC senior personnel, who agreed that the MOU is strategic to the government as well as to the company.

Duration of the Agreement

Hypothesis 2, "The duration of the government-business partnership is long-term, that is, a multi-year agreement of three and a half years or more", is supported by the results. Seven of the nine MOU's currently in place are of a five year duration and the two others are of an indefinite duration. MOU's therefore are of a longer

duration than the three and a half year duration of the average strategic partnership (Harrigan 1988). Evidence suggests that the actual duration of relationship is even longer than that specified in the MOU document. In six out of the nine cases, both government and company respondents agreed that the MOU represents the formalization of a relationship that already existed prior to the signing of the MOU. Though there was general agreement on this point, most respondents also believed that the MOU establishes in some way a new relationship. All respondents added that the relationship is expected to last beyond the specified duration.

Resources Contributed by the Government beyond Financial Support

Hypothesis 3 is as follows: "The government contributes identifiable resources beyond financing, in the areas of research and development, marketing and manufacturing." Results support this hypothesis for the areas of research and development and marketing, but do not generally support the hypothesis for the area of manufacturing. In the area of R&D, contributed resources identified by most respondents include direct research, supplier contacts and technical consulting. In the area of marketing, the government contributed sales contacts/trade shows, marketing consulting, joint venture and licensing promotions, and support for obtaining export permits. It was generally agreed that those resources not contributed by the government include manufacturing consulting, direct sales force and financial consulting. Manufacturing consulting was however mutually acknowledged as a contributed resource in one case, and direct sales force was contributed by the government in another case.

An attempt was made to obtain an objective measure of the relative significance of each contributed resource. The unit of measure was the proportion of working time devoted by individuals in government to offering each resource. Results were not precise, but estimates generally showed that government project officers, in working closely with branch managers, spend approximately half of their working time on project administration, ten to thirty percent of their time on the administration of the MOU document, and between fifteen to thirty percent of their time finding suppliers for the companies and engaging in technical and marketing consulting. ISTC senior management, on the other hand, focuses more on general policy issues and review functions relating to the MOU.

Decision Making Influence

Four hypotheses were developed concerning perceptions of shared influence between the government and the company. This discussion places the results of the research in the context of each of these hypotheses.

Hypothesis 4, "The government is perceived by the company as having a great deal of influence in decisions relating to the following areas of partnership (project) activity: finance, R&D, marketing and manufacturing", is supported only for the area of finance. In the areas of R&D and marketing, company respondents perceive that the government has on average between a small to moderate amount of influence in decisions, though the average rating for both areas is closer to a small amount of influence. In the area of manufacturing, the government is perceived by company respondents to have on average between no influence at all and a small amount of

influence in decisions.

In the area of finance, company respondents perceive that the government has a great deal of influence in decisions relating to the amount of the company's portion of project financing, that is, the amount of financing that the company must put up for a project. This influence is great because the government is admitted to be the organization that makes the final decision as to what the financial sharing ratio will be between the government and the company for a project under the MOU. Finance is the only area of project activity in which the government is generally acknowledged to participate in making final decisions; this area excludes however decisions concerning the source of the company's portion of project financing.

The results of hypothesis 5 are similar to the results of the previous hypothesis. Hypothesis 5, "The government perceives itself as having a great deal of influence in decisions relating to the following areas of partnership (project) activity: finance, R&D, marketing and manufacturing", is generally supported only for the area of finance. It should be noted however that in almost all areas, the government respondents' rating of their own influence was higher than the company's rating of government influence. As such, the government rated their own influence in the areas of R&D and marketing to be on average closer to a moderate amount, rather than to a small amount of influence. Also, the government respondents perceived themselves to have a small to moderate amount of influence in manufacturing, instead of the none to a small amount of influence as perceived by the company.

Hypothesis 6, "The company is perceived by the government as having a great deal of influence in decisions relating to the following areas of partnership (project) activity: finance, R&D, marketing and manufacturing", is supported by the results for

all areas of activity except finance. In finance, the company is perceived by the government to have on average a small to moderate amount of influence in decisions relating to the amount of project financing, that is, decisions concerning the sharing ratios for projects. However, the company has absolute say in how and where it will source its portion of project financing. The government perceives the company to have a great deal of influence in R&D, and between a great deal and total influence in decisions relating to marketing and manufacturing.

The results of hypothesis 7 are similar to the results of hypothesis 6. Hypothesis 7, "The company perceives itself as having a great deal of influence in decisions relating to the following areas of partnership (project) activity: finance, R&D, marketing and manufacturing", is supported by the results in all areas except finance. In finance, the company perceives itself to have on average a small to moderate amount of influence in decisions relating to the amount of project financing, that is, decisions concerning the sharing ratios for projects. It should be noted however that in almost all areas, the company respondents' rating of their own influence was higher than the government's rating of company influence. As such, the company rated their own influence in the areas of R&D, marketing and manufacturing to be on average closer to total influence, rather than to a great deal of influence.

There are obvious differences in the areas which each side has the greatest amount of decision-making influence. The government is perceived to have its highest decision-making influence in the area of finance (sharing ratio), followed in order by marketing, research and development, and manufacturing. The company has its highest decision-making influence in manufacturing, followed by marketing, research and development, and finance (sharing ratio). The influence structure in decision-making

appears to be such that where the government has the most influence, the company has the least influence and vice versa. This observation is not what was originally expected. The expectation was that both sides would equally have a great deal of influence in all areas, and therefore exhibit widespread shared influence in decision-making.

During the pre-test for this research, it was suggested that influence in decisions might vary across the stages of the project approval process. Unexpectedly, responses indicated that influence in decisions did not vary across these stages. The decision-making influence of the government and the company therefore appears not to be linked to the stages of the project approval process.

A Champion in both Organizations

Hypothesis 8, "A champion is present in both organizations involved in the government-business partnership", is supported by the results. With the exception of one government project officer and one company officer, all respondents perceive themselves to be the champion for the partnership (MOU) within their own organization. The two officers who do not perceive themselves as champions believe that they are not necessarily strong advocates for the relationship under the MOU.

The literature suggests the role of the champion for the partnership is adopted by the principal liaison (Doz 1988, Hull and Slowinski 1988). All respondents admit they are the principal liaison for their organization in dealing with the partner organization.

As expected, the most frequent interaction between the partner organizations

occurs between the principal liaisons of each organization. In cross-communications between principal liaisons and various levels of the partner organization, verbal communications are more frequent than written communications, and written communications are equally frequent or more frequent than briefings. Communications between the government's principal liaison and middle/lower level management is less often on average than at the VP level, and is in a different order of functional activity. Interaction with the president is also less often than with vice-presidents. On the company's side, the principal liaison's interaction with government experts other than the government project officer is rare, and is nil in the case of communications with manufacturing experts.

There is no clear consensus as to the total number of hours of contact per month between the government's principal liaison and all company representatives for issues relating to the MOU and its projects. It is clear however that government personnel other than the principal liaison interact with company representatives far less often than does the principal liaison. All contact is in fact coordinated through the ISTC's principal liaison, though such structured lines of communication do not necessarily exist on the company's side. Finally, contact between the organizations excludes all forms of external representation: no individuals outside the government or the company (i.e. consultants or lobbyists), interact on behalf of either organization for issues relating to the MOU and its projects.

Reasons for Entering into the Government-Business Partnership

Hypothesis 9 is as follows: "There are correspondences between the reasons for the company for entering into the government-business partnership and the reasons reported for a company entering into a strategic partnership". Results show that there are five reasons from the strategic partnership model which, in a majority of cases, correspond to reasons for the company entering into the government-business partnership under the MOU. A majority of company respondents believe that financial risk sharing, technical risk sharing, gaining competitive advantage, diversification of product lines and speed of new product development are relevant reasons for the company entering into the MOU with the government. These reasons are also ranked in order as the five most significant reasons. In addition, four of nine company respondents acknowledge that market risk sharing and new technology access are relevant reasons. The hypothesis is therefore supported by the results.

Reasons believed not to be relevant in the vast majority of cases include economies of scale, market access and gaining credibility from association the partner. Other reasons mentioned by company respondents for entering into the government-business partnership are more specific to the MOU instrument, though judged to be just as significant as the most relevant reasons from the strategic partnership model.

No specific hypothesis was developed to test the government's reasons for entering into the MOU. This is because the government's reasons are driven by public policy, which intuitively seems quite different from the business reasons found in the strategic partnership model. Data on the government's motivations for entering into

the agreement was nevertheless gathered. Interestingly, the majority of government respondents claimed that nine of the eleven motivations from the strategic partnership model were relevant reasons for the government entering into the MOU. The reasons acknowledged by government respondents were however not aimed at directly benefiting the government, but rather were objectives that the government was assisting the company to achieve. These objectives were also aimed in a broader sense at benefiting the entire industry and Canada as a whole.

Like their counterparts, the government respondents offered other reasons for entering into the MOU. These general reasons included amongst others, the assurance a long term relationship with the company, and the objective of promoting the growth of the industry. Government respondents who offered other reasons said that these were just as important as the most relevant "business" reasons from the strategic partnership model. Senior personnel at ISTC also offered other "general reasons" or policy objectives that the federal government was seeking to achieve through the establishment of the MOU instrument.

Control Mechanisms of the Government-Business Partnership

Categories of Provisions in the MOU

Hypothesis 10, "There are correspondences between the categories of provisions flowing from the MOU and the contractual provisions reported in strategic partnership agreements", is supported by the results. A majority of government and company

respondents agreed that fourteen of the twenty-four categories of provisions from the strategic partnership model were present in the MOU. The reliability of this proportion is strengthened by the fact that there was mutual agreement eighty nine percent of the time as to whether or not a category of provision was present in the MOU.

Categories of provisions in the MOU are generally quite specific in terms of content. Nine of the fourteen categories of provisions were considered to be very specific by the majority of respondents. Only four categories of provisions were perceived to be moderately specific. The single provision perceived to be not specific was the control over the flow of information between the parent and the company. When asked to describe other categories of provisions in the MOU, government and company respondents put forth five provisions which were particular to MOU's: World Product Mandate; transfer payments at fair market value; details of specific company performance targets; provision for the submission of the company reports; and source establishment.

Monitoring Practices

The final hypothesis, "There are correspondences between the monitoring practices flowing from the MOU and the monitoring practices reported to flow from strategic partnership agreements", is supported by the results. Monitoring practices from the strategic partnership model are generally found in the government-business partnership. Progress reporting is accomplished at the level of the project officer through informal discussions and formal periodic written reports. Joint steering committees include the Project Review Group (PRG), and various ad hoc committees

like the Canadian Content Review Committee. The MOU Consultative Committee is the equivalent of an alliance coordination unit, and involves senior management participation from both organizations.

The only practices from the strategic partnership model which are not found to flow from the MOU are first, senior management representation on the board of directors of the partner; and second, reports describing specific intangible issues like the level of cooperation and trust between the parties. A more general difference perhaps is that unlike the strategic partnership, monitoring under the MOU is one-sided: much more structure and emphasis is placed on monitoring by the government than is placed on monitoring by the company.

A Partnership under the MOU

When asked directly whether the relationship under the MOU was like that of a partnership, most respondents agreed that it was. The reasons given to support this point of view are summarized as follows:

- 1) the presence of mutual objectives, such as creating wealth, as well as other objectives that are distinct yet non-conflicting;
- 2) risk sharing between the organizations;
- 3) a statement in the MOU highlighting the presence of a "cooperative relationship";
- 4) assistance provided in many areas of company activity including R&D, marketing and finance; and,
- 5) sharing of costs in R&D, which for some projects are as high as fifty percent.

The few respondents who did not perceive the relationship to be like that of a partnership defended their positions with the following points:

- 1) the federal government may be a "crutch" rather than a partner, whose objective is to provide a minimum amount of federal assistance for a maximum amount of impact on the Canadian economy;
- 2) while risks in a partnership often change dramatically over time causing changes the roles of the partners, risks in the MOU are projected at the outset, and the MOU does not provide for dramatic changes in risk over time;
- 3) even though the MOU implies an agreement, it was not in itself a legal contract; and,
- 4) there is an imbalance of decision-making authority regarding projects, that is, final decisions are generally made by the company;

CHAPTER 8

CONCLUSION

Conclusions will be presented followed by benefits and limitations of the research. Implications of the research for government, companies, and researchers will be discussed at the end of the chapter.

Eleven hypotheses were developed in order to test for correspondences between the strategic partnership model and government-business partnerships under the MOU. The results of the research provide evidence to suggest that the government-business partnership (under the MOU) corresponds in general to the strategic partnership model, although this correspondence is not perfect.

The "attributes" dimension of the strategic partnership model is comprised of five distinct attributes. Four of the five attributes were found to be present in the government-business partnerships. These four attributes are the presence of strategic objectives, the long-term duration of the agreement, the exchange of complementary resources beyond financing, and a champion for the partnership in each organization.

The other attribute, shared-influence in decisions, is not obviously present in the government-business partnership. This is because both the government and company are not perceived to equally possess a great deal of influence in decisions relating to various areas of partnership (project) activity. While the government side is perceived to have a great deal of influence (and participation) in financing decisions, it only has a small to moderate amount in influence in decisions relating to R&D, marketing, and manufacturing. On the other hand, the company is perceived to have a great amount

of influence in R&D, marketing and manufacturing decisions, and only a small to moderate amount of influence in financing decisions. It therefore appears that where the government has the most influence, the company has the least influence and vice versa.

Though these results do not generally support shared-influence in decisions as an attribute of the government-business partnership, it can be concluded nevertheless that each side has at least some influence in decisions relating to all of the areas of activity. Results also lead to the conclusion that perceptions of the government and company respondents are similar regarding shared-influence in decisions; more generally, results show that the government and company have similar perceptions regarding all dimensions of the relationship.

The "motivations" dimension of the strategic partnership model outlines several reasons for partnering. Five reasons from the model correspond to reasons for the company entering into the government-business partnership. These reasons include, in descending order of significance, financial risk sharing, technical risk sharing, gaining competitive advantage, diversification of product lines and speed of new product development. On the government's side, nine of the eleven reasons from the strategic partnership model are also considered relevant reasons for the government entering into the MOU. These reasons are however not aimed at directly benefiting the government, but rather are objectives that the government is assisting the company to achieve. Other reasons, or policy-driven objectives, for the government entering into the MOU are just as significant as the most relevant "business" reasons from the strategic partnership model.

The final dimension of the strategic partnership model is the "control

mechanisms". Control mechanisms include contractual provisions and monitoring practices. Fourteen of twenty four categories of the contractual provisions from the strategic partnership model correspond in a majority of cases to equivalent categories of MOU provisions. These categories of provisions are for the most part very specific. Also, monitoring practices from the strategic partnership model correspond to monitoring practices flowing from the MOU in the government-business partnership.

In conclusion, the government-business partnership (under the MOU) corresponds in general to the strategic partnership model along each of the dimensions described. Also, the results reveal that the relationship is generally perceived to be like that of a partnership. In light of these findings, the government-business partnership (under the MOU) can now be thought of in a new way, that is, as a new form of strategic partnership.

Benefits and Limitations

This exploratory research is the first to examine, on a theoretical level, the nature of the relationship between government and business in the context of long-term financial contribution agreements. It is also the first study which employs strategic partnership theory as a model for examining government-business partnerships. As such, results of the research identify the attributes, motivations, and control mechanisms associated with government-business partnerships.

Results also highlight similarities and differences between perceptions of the federal government and perceptions of companies towards these new agreements. All

of these results give us with a better understanding of the dynamics of government-business partnerships.

One limitation of this research is the small size of the populations of government and company officers. Another limitation is the possibility of response errors due to factors such as the length of time and the extent to which a respondent was involved in the management/negotiation of the MOU document. A third limitation is the dearth of previous empirical research in the area of strategic partnerships; such research could have provided insights into other dimensions and variables which might have been integrated into this study.

Implications

The major implication of this study is that the government is acting as a partner with companies in the aerospace/defence electronics industry, and that this strategic partnership perspective should be reflected in government policy directives and company strategies. The organizations involved can use the dimensions of the strategic partnership model as a checklist for identifying the strengths and weaknesses of their relationship. For example, the following questions can be posed:

- 1) Does the MOU continue to focus over time on the strategic direction of the company, and enhance its competitive position ?
- 2) Are the objectives of the MOU clearly integrated in the strategic plan of the company ?
- 3) Do both parties expect the relationship under the MOU to be of a long-term duration ?

- 4) Is the government continuing to provide identifiable resources beyond financing ?
- 5) In what areas does each party have decision-making influence, and to what extent ?
- 6) Are both the project officer and government relations officers living up to their roles as champions ?
- 7) Are lines of communications clearly established ?
- 8) Are the reasons for a company wishing to enter into an MOU in line with the strategic partnership model ?
- 9) Are all provisions which may be relevant to the relationship clearly stated in the MOU ?
- 10) Are monitoring practices well-defined and effective ?

Further research should be undertaken to identify other dimensions or variables associated with strategic partnerships and government-business partnerships. Other types of agreements between government and business should also be explored to see if they also correspond to the strategic partnership model. This study is a starting point for future research in this area.

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MICROCOPY RESOLUTION TEST CHART
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APPENDIX A

Overview of the Memorandum of Understanding

Though broad MOU's exist between the federal government and industries other than aerospace-defence electronics, it is only in the latter industry that MOU's define plans of action within specified parameters. There are several reasons why the aerospace-defence electronics industry was singled out among others for the establishment of these action-oriented MOU's: 1) the larger dollar amount of contributions demanded by firms in the industry; 2) the greater frequency at which contributions were required for new projects; 3) and the vast potential of this industry for direct benefits to Canada; and, 4) the political desire to enhance the defence industrial base in Canada; (1).

The Memorandum of Understanding is a long-term strategic agreement and planning tool which establishes the parameters for all forms of government financial contributions to a firm. As such, the MOU establishes an upper limit on the dollar amount which the firm can expect to receive. Over the period covered under the MOU, contracts for the financing of specific projects are individually negotiated within the general terms and objectives of the MOU (see Appendix C for a typical MOU table of contents).

(1) These reasons were given during interviews conducted with ISTC senior personnel.

Projects which are expected to materialize are described in the MOU. A negotiated range for each project's financial sharing ratio is also outlined in the MOU. The actual sharing ratio for a specific project is decided upon only after a detailed project submission is received from the company. The sharing ratio will fall on the high or low end of the negotiated range depending on the ability of the company to attain company performance targets and minimum project specific criteria. As an example, a project could receive a high level of funding (35-50%), medium level (25-35%), or low level of funding (15-20%).

The company performance targets which determine the various levels of funding can be amended upon consent of both parties as a result of dramatic changes in industry indicators. Company performance targets include sales growth, income growth, employment growth, training programs and expansion of facilities. The minimum project specific criteria (also known as DIPP criteria), which unlike company performance targets are not amendable, include high canadian content, sophisticated technology, evidence of defence-related export markets, commercial viability, and identifiable economic benefits to Canada. Recently, ISTC has also sought to include World Product Mandate as a minimum criteria for companies with MOU's. World Product Mandate refers to a mandate granted to a Canadian subsidiary by a foreign multinational for the development and manufacturing of a specific technology strictly within Canada.

Repayment of financial contributions based on the commercial success of a project is the norm for projects assisted under the MOU. Repayment is based on sales attributable to a project (either a percentage royalty or a fixed dollar amount per sale), except where it is not practical to isolate sales flowing from a single project. In these

cases, the option of requiring repayment on a fixed schedule is also available as is the option of a royalty on the gross sales of the firm. Generally, repayment does not begin immediately after completion of the project but follows a predetermined grace period. The grace period may be defined either in terms of elapsed time or relative to project success. In the case of an MOU, the amount of repayment may not be limited by the amount of the contribution nor be of limited duration. Also, some of the funding under an MOU which involves capital assistance may be non-repayable.

DIPP

The Defense Industry Productivity Program (DIPP) is the principal program from which financial contributions under the MOU are sourced, though funding from other sources (programs) is possible. The MOU allows the government to coordinate financial contributions from several different government programs and departments. ISTC is the lead department which coordinates the MOU; coordination between government departments is achieved through an interdepartmental committee.

The primary objective of DIPP is "to enhance economic growth through promotion of defence-related exports" (Services and Subsidies to Business, 1986, 116). The secondary objectives are to provide a defence industrial base and to develop a defence technological capability. A review of the stated DIPP objectives, from its inception in 1959 to today, indicates a shift from a broad defence technology orientation including weapons and armaments to a mixed defence and related civil high technology orientation. Assistance under DIPP is provided to companies for the following purposes: research and development, establishing Canadian companies as qualified suppliers, modernizing facilities, and studying market feasibility.

APPENDIX B

Sample of MOU Objectives *

1. Purpose

The purpose of this MOU is to establish the framework for cooperation between the parties through the definition of long-term objectives, the establishment of performance targets for the Company, and the implementation of procedures for administration, consultation and monitoring of performance.

Each party recognizes that the achievement of the targets set down for it, as herein described, is related to and depends on the achievement of the corresponding targets by the other party. The purpose of the targets, therefore, is to establish the mutual expectation upon which a continued cooperative relationship can be based.

2. Objectives

2.1 Under this MOU, the Company seeks to:

- . Achieve strong performance and increased rate of growth in sales and employment through research and development, diversification, and capital investment.
- . Continually strengthen, expand and diversify its position as an international competitor in the aerospace, defence and electronics markets through implementation of a strategic business plan, and the aggressive marketing of products and services on the export market.
- . Maintain and expand its existing product charters and world product mandates.
- . Maintain and expand its range of products and its technology base through R&D programs, technology transfer and licensing.
- . Maintain an aggressive manpower training and development plan geared to the Company's future growth requirements.
- . Improve manufacturing productivity.
- . Increase Canadian Content and Canadian sources of supply.

2.2 ISTC seeks to:

- . Use its cooperative relationship with the Company and, where appropriate, its resources as a means of achieving stated national policies for industrial and regional development and the maintenance of a viable defence industrial base.
- . Strengthen the international competitiveness and technological capabilities of Canadian industry.
- . Encourage higher than previous levels of investment by the Company in order to increase the Company's growth rate in Canada as a result of federal support.
- . Provide the Company with greater planning confidence with respect to the future availability of assistance from the Defence Industry Productivity Program (DIPP) for the purpose of enabling the company to increase investment, sales, employment and Canadian content.
- . Establish a framework within which proposals for federal assistance can be reviewed, discussed and negotiated in a manner that is consistent with the mutual requirements and expectations of each party under this MOU.
- . Work with the Company to increase the Canadian content of production and enhance the technical and production capabilities of the Canadian subcontractor base.

* text drawn from an actual MOU

APPENDIX C

Table of Contents of a Typical MOU *

Main Body

WHEREAS, AND WHEREAS, NOW THEREFORE

1. Purpose
2. Objectives
 - Company seeks to
 - ISTC seeks to
3. Corporate Profile
4. Strategic Overview
5. Performance Indicators
6. Canadian Content
7. ISTC Sharing Ratios and Financial Support
8. MOU Management and Administration
9. MOU Liability
- 10 Term of MOU
- 11 Public Announcement
- 12 Confidentiality
- 13 ISTC/Company MOU Certification

Annexes

Annex A: Corporate Profile

- .Background on Company
- .Business Area Definition
- .Financial Information
- .Past Government Support

Annex B: Strategic Overview and Corporate Strategy

- .Strategic Thrust
- .Market Share
- .Current R&D Projects
- .Future R&D Projects
- .Strategic Initiatives

Annex C: Company Performance Indicators (for next five years)

- .Aggregate Performance Indicators
 - Sales, Net Income, Dividends, Capital Investment, R&D Investment
- .Employment and Training
- .R&D Investment - Support Linkage
- .Dividend Payments by Company to Parent
 - Target Levels and Excess Dividends

Annex D: Canadian Content Development

Annex E: Financial Assistance to Company

Annex F: MOU Management and Administration

- .Reports and Reviews
- .Consultation
- .Form of Contract
- .Financial Model

* text drawn from an actual MOU

APPENDIX D

Agreement on the Presence of Categories of Provisions in the MOU

	A	B	C	D	*
a) specific company performance requirements	8	0	0	1	
b) the scope of activities/mandates for:					
R&D	7	0	1	1	
manufacturing	6	2	1	0	
c) controls over the flow of the following resources between the parent and the company:					
personnel	0	1	0	8	
technology	6	0	1	2	
materials	0	0	0	9	
equipment	2	0	1	6	
capital (money)	6	0	1	2	
information	5	0	2	2	
d) controls over the flow of the following resources between the government and the company:					
personnel	0	0	0	9	
technology	3	0	1	5	
materials	0	0	0	9	
equipment	0	0	2	7	
capital (money)	7	1	1	0	
information	6	1	1	1	
e) dividend policy	5	0	0	4	
f) management structure					
joint decision-making/project review	6	1	1	1	
management autonomy	1	1	0	7	
g) asset valuation	0	0	1	8	
h) export controls	2	0	0	7	
i) technology protection	5	0	0	4	
j) duration of the agreement	7	0	0	2	
k) terms of renegotiation	6	1	1	1	
l) the termination clause	7	1	0	1	
Total	95	9	15	97	
	% 44	4	7	45	

* Number of cases.

A: government and company both responded that a category of provision was present in the MOU.

B: government responded that a category of provision was present, but company disagreed.

C: company responded that a category of provision was present, but government disagreed.

D: government and company both responded that a category of provision was not present in the MOU.

APPENDIX E

Specificity of MOU Provisions

	government responses *	company responses
a) company performance requirements	6v,2m,0n	7v,1m,0n
b) the scope of activities/mandates for:		
R&D	4v,2m,1n	6v,2m,0n
manufacturing	3v,4m,0n	3v,4m,0n
c) controls over the flow of the following resources between the parent and the company:		
personnel	1v,0m,0n	0v,0m,0n
technology	2v,4m,0n	2v,5m,0n
materials	0v,0m,0n	0v,0m,0n
equipment	1v,1m,0n	0n,3m,0n
capital (money)	5v,0m,1n	7v,0m,0n
information	0v,1m,4n	0v,2m,5n
d) controls over the flow of the following resources between the government and the company:		
personnel	0v,0m,0n	0v,0m,0n
technology	3v,0m,0n	2v,1m,1n
materials	0v,0m,0n	0v,0m,0n
equipment	0v,0m,0n	1v,1m,1n
capital (money)	8v,0m,0n	7v,0m,1n
information	7v,0m,0n	4v,3m,0n
e) dividend policy	4v,1m,0n	5v,0m,0n
f) management structure:		
joint decision-making/project review	2v,4m,1n	3v,4m,0n
management autonomy	1v,1m,0n	0v,0m,1n
g) asset valuation	0v,0m,0n	0v,1m,0n
h) export controls	1v,0m,1n	0v,0m,2n
i) technology protection	5v,0m,0n	3v,2m,0n
j) duration of the agreement	7v,0m,0n	7v,0m,0n
k) terms of renegotiation	2v,4m,1n	3v,4m,0n
l) termination clause	7v,1m,0n	4v,2m,1n

* Number of responses.

v: category of provision is very specific

m: category of provision is moderately specific

n: category of provision is not specific

APPENDIX F

GOVERNMENT INTERVIEW SCHEDULE

1. Title and area(s) of expertise of the interviewee (finance, R&D, marketing, manufacturing).

2. Are you the principal liaison with the company ? _____

3. i) Do you perceive yourself as a champion for the MOU ?
(a champion acts as 1) a coordinator of functional activities relating to the MOU; and, 2) an advocate for the MOU within the organization). _____

ii) If not, is there another single person in the government who would be considered the champion for the MOU ? _____ What is the title and area expertise of that person ?

4. i) How frequently does the principal liaison within the government communicate with the following company representatives ?
(enter one of the following numbers):

- 1: not at all
- 2: seldom, less than once a year
- 3: yearly
- 4: monthly
- 5: weekly
- 6: several times per week

<u>Communication with:</u>	verbal	written	briefings
a) company principal liaison (specify title)	—	—	—
b) other top management:			
President	—	—	—
VP Finance	—	—	—
VP R&D	—	—	—
VP Marketing	—	—	—
VP Manufacturing	—	—	—
c) middle and lower level management:			
finance	—	—	—
R&D	—	—	—
marketing	—	—	—
manufacturing	—	—	—

ii) What is the average number of hours of contact per month between the government's principal liaison and company representative(s), for issues relating to the a) the MOU document itself, and b) the specific projects under the MOU ?

a) _____ b) _____

5. i) Do individuals in the government other than the principal liaison interact directly with the company on issues relating to the MOU document and the specific projects under the MOU ? ____ If so, how many individuals are there in each of the following areas of expertise ?

area number of people

finance _____

R&D _____

manufacturing _____

marketing _____

other (specify) _____

ii) What is the average number of hours of contact per month (or per year if not applicable on a monthly basis) between these individuals and company representative(s), for issues relating to the a) the MOU document itself, and b) the specific projects under the MOU ?

a) _____ b) _____

6. i) Do outside representatives of the government (consultants, lawyers, accountants) interact directly with the company on issues relating to the MOU and its projects ? ____

ii) What is the title of each of these outside representatives of the government ?

iii) What is the average number of hours of contact per month (or per year if not available on a monthly basis) between these outside representatives of the government and company representative(s), for issues relating to the MOU and its projects ? _____

Duration of the MOU

7. When was the current MOU signed ? _____

8. What is the contracted duration of the MOU ? _____

9. Was there a previous MOU ? ____ If so, when was it signed ? ____

10. i) Is the MOU a formalization of a relationship that already existed between the government and the company ?

ii) Does the MOU establish a new relationship ?

11 Is the relationship expected to last beyond the contracted duration of the MOU (renegotiation) ? _____

Strategic Objectives

12. Would you consider the objectives of the MOU to be strategic to the company (Strategic means that the objectives focus on the future direction of the company and aim at enhancing the company's competitive position) ?

13. i) Please describe the other industry development initiatives, that is, other sources of financial contributions to the company (municipal, provincial...).

ii) How significant is the MOU compared to other industry development initiatives ?

- 1. The MOU is far less sign significant _____
- 2. The MOU is somewhat less significant _____
- 3. About the same significance _____
- 4. The MOU is somewhat more significant _____
- 5. The MOU is far more significant _____

iii) Of the total financial contribution received by the company, what would you estimate to be the percentage (%) falling under the MOU, and the % from all other sources listed above ?

iv) How effective a tool has the MOU been for meeting the strategic objectives of the government in industrial development ?

- 1. The MOU is extremely ineffective _____
- 2. The MOU is mostly ineffective _____
- 3. The MOU is moderately effective _____
- 4. The MOU is mostly effective _____
- 5. The MOU is extremely effective _____

14. How many projects have been initiated under the MOU since the agreement was first signed, in each of the following categories ?

Total Government Financial
Contribution per Project (\$):

Number of Projects

- 1. 0 - 500,000 _____
- 2. 500,001 - 1,000,000 _____
- 3. 1,000,001 - 5,000,000 _____
- 4. 5,000,001 - 20,000,000 _____
- 5. 20,000,001 - 50,000,000 _____
- 6. > 50,000,000 _____

15. In your estimation, how many projects have yet to be initiated over the life of the MOU in each of the following categories ?

1. 0 - 500,000	_____
2. 500,001 - 1,000,000	_____
3. 1,000,001 - 5,000,000	_____
4. 5,000,001 - 20,000,000	_____
5. 20,000,001 - 50,000,000	_____
6. > 50,000,000	_____

16. If the MOU did not exist, which of the projects previously listed would not have been undertaken ? If not, why not ?

Exchange of Complementary Resources

17. i) What resources does the government contribute beyond financing, in the areas of research and development, marketing, and manufacturing ? Describe each of these resources. Possible contributed resources include the following:

direct research

technical consulting

manufacturing consulting

supplier contacts

financial consulting

marketing consulting

direct sales force

sales contacts/trade shows

other (specify)

ii) Of the total working hours devoted to the MOU and its projects by the project officer, what is the percentage of time devoted to each of the following categories ?

background research for projects	_____ %
conducting research and development	_____ %
technical consulting	_____ %
manufacturing consulting	_____ %
supplier contacts	_____ %
financial consulting	_____ %
marketing consulting	_____ %
direct sales force	_____ %
sales contacts/trade shows	_____ %
MOU general administration	_____ %
Project general administration	_____ %
other (specify)	_____ %
Total	100%

iii) Of your total working hours devoted to the MOU and its projects by other individuals in the government other than the project officer, estimate the proportion of total time devoted to each of the following categories ?

background research for projects	_____ %
conducting research and development	_____ %
technical consulting	_____ %
manufacturing consulting	_____ %
supplier contacts	_____ %
financial consulting	_____ %
marketing consulting	_____ %
direct sales force	_____ %
sales contacts/trade shows	_____ %
MOU general administration	_____ %
Project general administration	_____ %
other (specify)	_____ %
Total	100%

Decision-Making Influence

Questions #18 to #25 are designed to examine the extent to which the government and the company each have influence in decisions relating to projects under the MOU. For each of these questions, please respond using the scale of 1 to 5, which measures the degree of influence. Enter your response (i.e. on the scale of 1 to 5) for each stage of a project.

Scale

- 1: neutral/ no influence
- 2: a small amount of influence
- 3: a moderate amount of influence
- 4: a great deal of influence
- 5: total influence - government solely decides

18. i) For a project qualifying under the MOU, to what extent does the government have influence in decisions relating to the source of the company's portion of project financing (for example, the choice between working capital, debt, or a riskier financial instrument) ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

ii) For a project qualifying under the MOU, to what extent does the government have influence in decisions relating to the amount of the company's portion of project financing (the sharing ratio) ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

19. For a project qualifying under the MOU, to what extent does the company have influence in decisions relating to the government's portion of project financing (sharing ratio of financial contributions) ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

20. For a project qualifying under the MOU, to what extent does the government have influence in decisions relating to research and development ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

21. For a project qualifying under the MOU, to what extent does the company have influence in decisions relating to research and development ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

22. For a project qualifying under the MOU, to what extent does the government have influence in decisions relating to manufacturing ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

23. For a project qualifying under the MOU, to what extent does the company have influence in decisions relating to manufacturing ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

24. For a project qualifying under the MOU, to what extent does the government have influence in decisions relating to marketing ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

25. For a project qualifying under the MOU, to what extent does the company have influence in decisions relating to marketing ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

Questions #26 to #30 are designed to discover whether the government participates in making final decisions with respect to project financing, research and development, marketing and manufacturing. Please answer yes, no, or neutral for each question, and indicate whether your response to the question would be different across the various stages of a project.

26. i) For a project qualifying under the MOU, does the government participate in making final decisions with respect to the source of the company's portion of project financing (for example, the choice between working capital, debt, or a riskier financial instrument) ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

ii) For a project qualifying under the MOU, does the government participate in making final decisions with respect to the amount of the company's portion of project financing (the sharing ratio) ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

27. For a project qualifying under the MOU, does the company participate in making final decisions with respect to the government's portion of project financing (sharing ratio of financial contributions) ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

28. For a project qualifying under the MOU, does the government participate in making final decisions with respect to project research and development ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

29. For a project qualifying under the MOU, does the government participate in making final decisions with respect to project manufacturing ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

30. For a project qualifying under the MOU, does the government participate in making final decisions with respect to project marketing ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

31. Would you consider the relationship between the government and the company to be like that of a partnership ? Why or why not ?

Reasons for Entering the MOU

The following questions are designed to discover the reasons for the government for entering into the MOU.

32. For the government, which of the following were reasons for entering into an MOU ?

- a) to gain and sustain competitive advantage
 - for the company —
 - for Canada —
- b) risk sharing - financial risk/ funding development —
- c) risk sharing - technological risk —
- d) risk sharing - market acceptance risk —
- e) gaining credibility from association with the partner —
- f) speed - to accelerate new product development —
- g) diversification of product lines —
- h) new technology access —
- i) economies of scale —
- j) market access —

33. Were there any other reasons for entering into the MOU ? If so, what were they ?

34. Please rank the reasons selected above according to their significance as reasons for entering into the MOU. You may use ties, that is, you may rank those that you feel have the same degree of significance with the same number. (indicate numbers 1,2,3... where 1 is the most significant reason; for those not applicable enter n/a)

- a) to gain and sustain competitive advantage
 - for the company —
 - for Canada —
- b) risk sharing - financial risk/ funding development —
- c) risk sharing - technological risk —
- d) risk sharing - market acceptance risk —
- e) gaining credibility from association with the partner —
- f) speed - to accelerate new product development —
- g) diversification of product lines —
- h) new technology access —
- i) economies of scale —
- j) market access —
- k) other (specify) —

Control Mechanisms

The following questions are designed to examine the control mechanisms of the MOU. Control mechanisms to be examined are first, the categories of provisions in the MOU and second, the monitoring practices.

35. Which of the following categories of provisions are included in the MOU ?

- a) specific company performance requirements _____
- b) the scope of activities/mandate for:
 - R&D _____
 - manufacturing _____
 - other (specify) _____
- c) controls over the flow of the following resources between the government and the company:
 - personnel _____
 - technology _____
 - materials _____
 - equipment _____
 - capital (money) _____
 - information _____
- controls over the flow of the following resources between the parent and the company:
 - personnel _____
 - technology _____
 - materials _____
 - equipment _____
 - capital (money) _____
 - information _____
- d) dividend policy _____
- e) management structure:
 - joint decision-making/project review _____
 - management autonomy _____
- f) asset valuation _____
- g) export controls _____
- h) technology protection _____
- i) duration of the agreement _____
- j) terms of renegotiation _____
- k) the termination clause _____

36. What other provisions exist that you can think of ?

37. For those categories of provisions which you have indicated above as existing in the MOU, how specific are the details of each provision ? Indicate the level of specificity using the following letters:

n : not specific
m : moderately specific
v : very specific

a) company performance requirements	—
b) the scope of activities/mandate for:	
R&D	—
manufacturing	—
other (specify)	—
c) controls over the flow of the following resources
between the government and the company:	
personnel	—
technology	—
materials	—
equipment	—
capital (money)	—
information	—
controls over the flow of the following resources
between the parent and the company:	
personnel	—
technology	—
materials	—
equipment	—
capital (money)	—
information	—
d) dividend policy	—
e) management structure:	
joint decision-making/project review	—
management autonomy	—
f) asset valuation	—
g) export controls	—
h) technology protection	—
i) duration of the agreement	—
j) terms of renegotiation	—
k) the termination clause	—

Monitoring Practices

38. i) How does the government monitor the MOU ?

39. Are there specific reports given both to the government, and within the company, covering the following areas:

performance of projects	<hr/>
the progress/status of projects	<hr/>
the general performance of the partnership/MOU which analyses	
the level of cooperation, trust	
and respect between parties.	<hr/>

40. Is there an alliance coordination unit formally set up to monitor the MOU and its project ? Please specify.

41. Are there committees formed at different hierarchial levels within both organizations to interact horizontally ?

43. i) Does senior management of the government and the company participate in monitoring of the MOU ? Please specify.

ii) Is there government representation on the board of directors of the company ?

End of Interview.

APPENDIX G

COMPANY INTERVIEW SCHEDULE

1. Title and area(s) of expertise of the interviewee (finance, R&D, marketing, manufacturing).

2. Are you the principal liaison with the government ? _____

3. i) Do you perceive yourself as a champion for the MOU ?
(a champion acts as 1) a coordinator of functional activities relating to the MOU; and, 2) an advocate for the MOU within the company). _____

ii) If not, is there another single person in your company who would be considered the champion for the MOU ? _____ What is the title and functional specialization of that person ?

4. i) How frequently does the principal liaison within the company communicate with the following government representatives ?

(enter one of the following numbers):

- 1: not at all
- 2: seldom, less than once a year
- 3: yearly
- 4: monthly
- 5: weekly
- 6: several times per week

Communication with: verbal written briefings

a) government principal liaison
(specify title)_____

_____ _____ _____

b) other government experts in:

finance

_____ _____ _____

R&D

_____ _____ _____

marketing

_____ _____ _____

manufacturing

_____ _____ _____

ii) What is the average number of hours of contact per month between your company's principal liaison and government representative(s), for issues relating to a) the MOU document; itself, and b) the specific projects under the MOU ?

a) _____ b) _____

5. i) Do individuals in the company other than the principal liaison interact directly with the government on issues relating to the MOU document itself and the specific projects under the MOU ? _____ If so, how many of these individuals are there from each of the following functional areas of the company ?

area number of people

finance _____
 R&D _____
 manufacturing _____
 marketing _____
 other (specify) _____

ii) What is the average number of hours of contact per month (or per year if not applicable on a monthly basis) between these individuals and government representative(s), for issues relating to a) the MOU document itself and b) the specific projects under the MOU ?

a) _____ b) _____

6. i) Do outside representatives of the company (lawyers, accountants, consultants, lobbyists) interact directly with the government on issues relating to the MOU and its projects ? _____

ii) What is the title of each of these outside representatives of the company ?

iii) What is the average number of hours of contact per month (or per year if not applicable on a monthly basis) between these outside representatives of the company and government representative(s), for issues relating to the MOU and its projects ? _____

Duration of the MOU

7. When was the current MOU first signed ? _____

8. What is the contracted duration of the MOU ? _____

9. Was there a previous MOU ?__ If so, when was it signed ? _____

10. i) Is the MOU a formalization of a relationship that already existed between the government and the company ?

ii) Does the MOU establish a new relationship ?

11. Is the relationship expected to last beyond the contracted duration of the MOU (renegotiation) ? _____

Strategic Objectives

12. i) Would you consider the objectives of the MOU to be strategic to the company (Strategic means that the objectives focus on the future direction of the company and aim at enhancing the company's competitive position) ?

ii) Do these objectives aim at improving your company's competitive position ? If so, how ?

iii) Do these objectives alter the future direction of your company ? If so, how ?

iv) Is the MOU integrated in the strategic plan of the company ? _____

13. i) Please describe the other industry development initiatives, that is, other sources of financial contributions to the company (municipal, provincial...).

ii) How significant is the MOU compared to other industry development initiatives ?

1. The MOU is far less significant _____
2. The MOU is somewhat less significant _____
3. About the same significance _____
4. The MOU is somewhat more significant _____
5. The MOU is far more significant _____

iii) Of the total financial contribution received by the company, what would you estimate to be the percentage (%) falling under the MOU, and the % from all other sources listed above ?

iv) How effective a tool has the MOU been for meeting the strategic objectives of the government in industrial development ?

1. The MOU is extremely ineffective _____
2. The MOU is mostly ineffective _____
3. The MOU is moderately effective _____
4. The MOU is mostly effective _____
5. The MOU is extremely effective _____

14. How many projects have been initiated under the MOU since the agreement was first signed, in each of the following categories ?

Total Government Financial
Contribution per Project (\$):

Number of Projects

1. 0 - 500,000

2. 500,001 - 1,000,000

3. 1,000,001 - 5,000,000

4. 5,000,001 - 20,000,000

5. 20,000,001 - 50,000,000

6. > 50,000,000

15. In your estimation, how many projects have yet to be initiated over the life of the MOU in each of the following categories ?

1. 0 - 500,000

2. 500,001 - 1,000,000

3. 1,000,001 - 5,000,000

4. 5,000,001 - 20,000,000

5. 20,000,001 - 50,000,000

6. > 50,000,000

16. If the MOU did not exist, which of the projects previously listed would not have been undertaken ? If not, why not ?

Exchange of Complementary Resources

17 i) What resources does the government contribute beyond financing, in the areas of research and development, marketing, and manufacturing ? Describe each of these resources. Possible contributed resources include the following:

direct research

technical consulting

manufacturing consulting

supplier contacts

financial consulting

marketing consulting

direct sales force

sales contacts/trade shows

other (specify)

Decision-Making Influence

Questions #18 to #25 are designed to examine the extent to which the government and the company each have influence in decisions relating to projects under the MOU. For each of these questions, please respond using the scale of 1 to 5, which measures the degree of influence. Enter your response (i.e. on the scale of 1 to 5) for each stage of a project.

Scale

- 1: neutral/ no influence
- 2: a small amount of influence
- 3: a moderate amount of influence
- 4: a great deal of influence
- 5: total influence - government solely decides

18. i) For a project qualifying under the MOU, to what extent does the government have influence in decisions relating to the source of the company's portion of project financing (for example, the choice between working capital, debt, or a riskier financial instrument) ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

ii) For a project qualifying under the MOU, to what extent does the government have influence in decisions relating to the amount of the company's portion of project financing (the sharing ratio) ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

19. For a project qualifying under the MOU, to what extent does the company have influence in decisions relating to the government's portion of project financing (sharing ratio of financial contributions) ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

20. For a project qualifying under the MOU, to what extent does the government have influence in decisions relating to research and development ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

21. For a project qualifying under the MOU, to what extent does the company have influence in decisions relating to research and development ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

22. For a project qualifying under the MOU, to what extent does the government have influence in decisions relating to manufacturing ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

23. For a project qualifying under the MOU, to what extent does the company have influence in decisions relating to manufacturing ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

24. For a project qualifying under the MOU, to what extent does the government have influence in decisions relating to marketing ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

25. For a project qualifying under the MOU, to what extent does the company have influence in decisions relating to marketing ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

Questions #26 to #30 are designed to discover whether the government participates in making final decisions with respect to project financing, research and development, marketing and manufacturing. Please answer yes, no, or neutral for each question, and indicate whether your response to the question would be different across the various stages of a project.

26. i) For a project qualifying under the MOU, does the government participate in making final decisions with respect to the source of the company's portion of project financing (for example, the choice between working capital, debt, or a riskier financial instrument) ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

ii) For a project qualifying under the MOU, does the government participate in making final decisions with respect to the amount of the company's portion of project financing (the sharing ratio) ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

27. For a project qualifying under the MOU, does the company participate in making final decisions with respect to the government's portion of project financing (sharing ratio of financial contributions) ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

28. For a project qualifying under the MOU, does the government participate in making final decisions with respect to project research and development ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

29. For a project qualifying under the MOU, does the government participate in making final decisions with respect to project manufacturing ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

30. For a project qualifying under the MOU, does the government participate in making final decisions with respect to project marketing ?

- i) Consultation stage: pre-submission of a project proposal _____
- ii) Negotiation stage: post-submission of a project proposal _____
- iii) Approval stage: project approval _____
- iv) Implementation stage: post-signing of contract _____

31. Would you consider the relationship between the government and the company to be like that of a partnership ? Why or why not ?

Reasons for Entering the MOU

The following questions are designed to discover the reasons for the company for entering into the MOU.

32. For your company, which of the following were reasons for entering into an MOU ?

- a) to gain and sustain competitive advantage _____
- b) risk sharing - financial risk/ funding development _____
- c) risk sharing - technological risk _____
- d) risk sharing - market acceptance risk _____
- e) gaining credibility from association with the partner _____
- f) speed - to accelerate new product development _____
- g) diversification of product lines _____
- h) new technology access _____
- i) economies of scale _____
- j) market access _____

33. Were there any other reasons for entering into the MOU ? If so, what were they ?

34. Please rank the reasons selected above according to their significance as reasons for entering into the MOU. You may use ties, that is, you may rank those that you feel have the same degree of significance with the same number. (indicate numbers 1,2,... where 1 is the most significant reason; for those not applicable enter n/a)

- a) to gain and sustain competitive advantage _____
- b) risk sharing - financial risk/ funding development _____
- c) risk sharing - technological risk _____
- d) risk sharing - market acceptance risk _____
- e) gaining credibility from association with the partner _____
- f) speed - to accelerate new product development _____
- g) diversification of product lines _____
- h) new technology access _____
- i) economies of scale _____
- j) market access _____
- k) other (specify) _____

Control Mechanisms

The following questions are designed to examine the control mechanisms of the MOU. Control mechanisms to be examined are first, the categories of provisions in the MOU and second, the monitoring practices.

35. Which of the following categories of provisions are included in the MOU ?

- a) specific company performance requirements _____
- b) the scope of activities/mandate for:
 - R&D _____
 - manufacturing _____
 - other (specify) _____
- c) controls over the flow of the following resources between the government and the company:
 - personnel _____
 - technology _____
 - materials _____
 - equipment _____
 - capital (money) _____
 - information _____
- controls over the flow of the following resources between the parent and the company:
 - personnel _____
 - technology _____
 - materials _____
 - equipment _____
 - capital (money) _____
 - information _____
- d) dividend policy _____
- e) management structure:
 - joint decision-making/project review _____
 - management autonomy _____
- f) asset valuation _____
- g) export controls _____
- h) technology protection _____
- i) duration of the agreement _____
- j) terms of renegotiation _____
- k) the termination clause _____

36. What other provisions exist that you can think of ?

37. For those categories of provisions which you have indicated above as existing in the MOU, how specific are the details of each provision ? Indicate the level of specificity using the following letters:

n : not specific
m : moderately specific
v : very specific

a) company performance requirements	_____
b) the scope of activities/mandate for:	
R&D	_____
manufacturing	_____
other (specify)	_____
c) controls over the flow of the following resources	
between the government and the company:	
personnel	_____
technology	_____
materials	_____
equipment	_____
capital (money)	_____
information	_____
controls over the flow of the following resources	
between the parent and the company:	
personnel	_____
technology	_____
materials	_____
equipment	_____
capital (money)	_____
information	_____
d) dividend policy	_____
e) management structure:	
joint decision-making/project review	_____
management autonomy	_____
f) asset valuation	_____
g) export controls	_____
h) technology protection	_____
i) duration of the agreement	_____
j) terms of renegotiation	_____
k) the termination clause	_____

Monitoring Practices

38. i) How does the government monitor the MOU ?

ii) How is monitoring performed internally within the company ?

39. Are there specific reports given both to the government, and within the company, covering the following areas:

performance of projects
 the progress/status of projects
 the general performance of the
 partnership/MOU which analyses
 the level of cooperation, trust
 and respect between parties.

40. Is there an alliance coordination unit formally set up to monitor the MOU and its project ? Please specify.

41. Are there committees formed at different hierarchial levels within both organizations to interact horizontally ?

43. i) Does senior management of the government and the company participate in monitoring of the MOU ? Please specify.

ii) Is there government representation on the board of directors of the company ?

End of Interview.

APPENDIX H

SENIOR ISTC INTERVIEW SCHEDULE

1. What were the original reasons for the establishment of the MOU instrument ?

2. Which of the following were reasons for the government entering into MOU's with companies ?

- a) to gain and sustain competitive advantage
 - for the company _____
 - for Canada _____
- b) risk sharing - financial risk/ funding development _____
- c) risk sharing - technological risk _____
- d) risk sharing - market acceptance risk _____
- e) gaining credibility from association with the partner _____
- f) speed - to accelerate new product development _____
- g) diversification of product lines _____
- h) new technology access _____
- i) economies of scale _____
- j) market access _____

3. i) On balance, is the MOU achieving government policy objectives in industrial development ?

ii) How effective a tool has the MOU been for meeting the strategic objectives of the government in industrial development ?

- 1. The MOU is extremely ineffective _____
- 2. The MOU is mostly ineffective _____
- 3. The MOU is moderately effective _____
- 4. The MOU is mostly effective _____
- 5. The MOU is extremely effective _____

4. Would you consider the objectives of the MOU to be strategic to the company (Strategic means that the objectives focus on the future direction of the company and aim at enhancing the company's competitive position) ?

5. Would you consider the relationship between the government and the company under the MOU to be like that of a partnership ? Why or why not ?

End of interview.

END

22/02/91

FIN